GroupWise Mobility Service 18
Administration Guide

November 2017

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About This Guide

The *GroupWise Mobility Service 18 Administration Guide* helps you to manage your GroupWise Mobility system after you have set it up.

- Chapter 1, “GroupWise Mobility Administration Console,” on page 9
- Chapter 2, “GroupWise Mobility System Management,” on page 19
- Chapter 3, “GroupWise Sync Agent Configuration,” on page 31
- Chapter 4, “Device Sync Agent Configuration,” on page 39
- Chapter 5, “GroupWise Mobility System Monitoring,” on page 45
- Chapter 6, “GroupWise Mobility User Management,” on page 55
- Chapter 7, “GroupWise Mobility Device Management,” on page 61
- Chapter 8, “GroupWise Mobility for Microsoft Outlook,” on page 67
- Chapter 9, “GroupWise Mobility System Security,” on page 79
- Appendix A, “GroupWise Mobility System Troubleshooting,” on page 93

Audience

This guide is intended for network administrators who manage a Mobility system to support GroupWise users and their mobile devices.

Feedback

We want to hear your comments and suggestions about this manual and the other documentation included with this product. Please use the User Comment feature at the bottom of each page of the online documentation.

For all GroupWise Mobility Service documentation, see the GroupWise Mobility Service 18 Documentation website (http://www.novell.com/documentation/groupwise18).

In addition to the GroupWise Mobility Service product documentation, the following resources provide information about the Mobility Service:

- Support and Knowledgebase (http://www.novell.com/support)
- GroupWise Mobility Service Cool Solutions (https://www.novell.com/communities/coolsolutions/tag/groupwise-mobility-service)
- GroupWise Mobility Service Devices Wiki (http://wiki.novell.com/index.php/GroupWise_Mobility_Devices)
- GroupWise Support Forums (https://forums.novell.com/forumdisplay.php/356-GroupWise)
- GroupWise Product Website (http://www.novell.com/products/groupwise)

1 GroupWise Mobility Administration Console

Configuration of your GroupWise Mobility system is done through the Mobility Administration console. When you log in as the Mobility administrator (the LDAP Admin user that was set up during installation, or `root`), you can configure your Mobility system. When users log in using their user names and passwords (GroupWise or LDAP, depending on the user source for authentication), they can control various aspects of data synchronization.

- "Accessing the Mobility Admin Console as an Administrator" on page 9
- "Accessing the Mobility Admin Console as a Mobile Device User" on page 10
- "Accessing the Mobility Admin Console As a User When You Are an Administrator" on page 10
- "Configuring the Mobility Admin Console" on page 10
- "Unlocking the Mobility Admin Console" on page 17

For a list of supported web browsers, see "Web Browser Requirements for the Mobility Admin Console" in the *GroupWise Mobility Service 18 Installation Guide*.

Accessing the Mobility Admin Console as an Administrator

1 In your web browser, access the Mobility Admin console at the following URL:

   `https://`*`mobility_server`*`_address:8120`

   Replace *`mobility_server_address`* with the IP address or DNS hostname of the server where the Mobility Service is installed.

2 Specify the user name of the Mobility administrator.

   If you are using LDAP as your user source, you can specify the `root` user name, the user name of the LDAP user provided during installation, or the user name any other LDAP user that has been added as a Mobility administrator (see "Setting Up Multiple Mobility Administrator Users" on page 13).

   If you are using GroupWise as your user source, you can specify the `root` user name or the user name of any other GroupWise user that has been added as a Mobility administrator (see "Adding GroupWise Users as Mobility Administrators" on page 17).

3 Specify the password for the user, then click **Login**.

   Mobility system configuration and administration is performed using the Mobility Admin console. For instructions, see the following sections:

   - Chapter 2, "GroupWise Mobility System Management," on page 19
   - Chapter 3, "GroupWise Sync Agent Configuration," on page 31
   - Chapter 4, "Device Sync Agent Configuration," on page 39
   - Chapter 5, "GroupWise Mobility System Monitoring," on page 45

* Chapter 6, “GroupWise Mobility User Management,” on page 55
* Chapter 7, “GroupWise Mobility Device Management,” on page 61

4 Click **Logout** to exit the Mobility Admin console.

Accessing the Mobility Admin Console as a Mobile Device User

Mobile device users can use the Mobility Admin console URL to access the Mobility Settings page by logging in with their personal user names and passwords. If you are using LDAP as your user source, users log in with their LDAP (network) user names and passwords. If you are using GroupWise as your user source, users log in with their GroupWise (mailbox) user names and passwords.

1 In your web browser, access the Mobility Admin console at the following URL:

`https://mobility_server_address:8120`

Replace *mobility_server_address* with the IP address or DNS hostname of the server where the Mobility Service is installed.

2 Specify your LDAP or GroupWise user name and password, then click **Login**.

3 View or print the GroupWise Mobility Quick Start for Mobile Device Users to learn how to use the Mobility Admin console Mobility Settings page.

Accessing the Mobility Admin Console As a User When You Are an Administrator

As a Mobility administrator, you can access your personal Mobility Settings page with the following URL:

`https://mobility_server_address:8120/admin/user/user_name`

Replace *mobility_server_address* with the IP address or DNS hostname of the server where you installed the GroupWise Mobile Service. Replace *user_name* with your personal LDAP or GroupWise user name.

Configuring the Mobility Admin Console

You can change the configuration of the Mobility Admin console to meet your administrative needs.

* “Adjusting the Mobility Admin Console Polling Rate for Groups of Users” on page 11
* “Using the Mobility Admin Console with a Single Sign-On Solution” on page 11
* “Changing between LDAP and GroupWise as the User Source” on page 12
* “Modifying LDAP Information in Relation to Your Mobility System (Optional)” on page 12
* “Adding GroupWise Users as Mobility Administrators” on page 17

Adjusting the Mobility Admin Console Polling Rate for Groups of Users

During installation of the Mobility Service, you selected the source (LDAP or GroupWise) from which users and groups of users can be added to your Mobility system. For background information, see "Selecting the User Source for Your Mobility System" in the *GroupWise Mobility Service 18 Installation Guide*.

If you selected **LDAP** as your user source, groups of users in your Mobility system correspond to LDAP groups. The Admin console polls only the groups in containers that it has been configured to search. For more information, see "Searching Multiple LDAP Contexts for Users and Groups" on page 13.

If you selected GroupWise as your user source, groups of users in your Mobility system correspond to GroupWise groups (distribution lists in older GroupWise systems). The Mobility Admin console locates GroupWise groups based on their *group_name.post_office.domain* location in your GroupWise system

When you add a group of users to your Mobility system, the group's existing members are added to the group as displayed in the Mobility Admin console. Subsequently, the Mobility Admin console polls for updates to group membership. This ensures that the group membership that is displayed in the Mobility Admin console always matches the membership in the LDAP directory or the GroupWise system.

By default, the Mobility Admin console polls the user source for changes in group membership every 1800 seconds (30 minutes).

1. In the Mobility Admin console, click **Config** > **User Source**.
2. Adjust the poll rate as needed to synchronize the group membership in the Mobility Admin console with current group membership in the LDAP directory or the GroupWise system.
3. Click **Save** to save the new setting(s).
4. Restart the Mobility Service:

```
rcgms restart
```

Using the Mobility Admin Console with a Single Sign-On Solution

If you are using a single sign-on solution such as NetIQ Access Manager or KeySheild SSO, the Mobility Admin console does not require authentication when you are already logged in to the single sign-on solution.

- For Access Manager, no extra configuration is required.
- For KeyShield SSO, you must provide Keyshield SSO settings on the Single Sign-On page in the Mobility Admin console. For more information, see KeyShieldSSO (http://www.keyshieldsso.com).

Changing between LDAP and GroupWise as the User Source

Regardless of the user source that you selected during installation (LDAP or GroupWise), you can change to the other user source at any time. For background information, see "Selecting the User Source for Your Mobility System" in the *GroupWise Mobility Service 18 Installation Guide*.

1 In the Mobility Admin console, click **Config**> **User Source**.

2 In the **Provisioning** field, select **LDAP** or **GroupWise** as the source from which you want the Mobility Admin console to obtain users and groups of users to add to your Mobility System.

   If you selected **GroupWise** as the user source when you installed your Mobility system and you now select **LDAP**, you must provide the configuration information for the LDAP server in order to change from GroupWise to LDAP provisioning in the Mobility Admin console.

   You can also use GroupWise LDAP to provision users after the install. For more information on using GroupWise LDAP, see "Configuring GroupWise LDAP Provisioning" on page 15.

   If you have set up your Mobility system so that some users are provisioned from LDAP and others are provisioned from GroupWise, you can mouse over each user on the Users page to display the LDAP context or GroupWise `user_name.post_office.domain` location.

3 (Conditional) If you selected **LDAP** in the **Provisioning** field, select **LDAP** or **GroupWise** in the **Authentication** field to select the password that is required for mobile devices to log in to your Mobility system.

   IMPORTANT: If you are using GroupWise LDAP, you must select **GroupWise** in the **Authentication** field.

   If you select **LDAP**, mobile devices use LDAP passwords as provided by the LDAP server that your Mobility system is configured to access. If you select **GroupWise**, device authentication is provided through the GroupWise POA. The POA can be configured to provide either GroupWise authentication or LDAP authentication for GroupWise users and devices.

   If you selected **GroupWise** in the **Provisioning** field, you cannot select **LDAP** in the **Authentication** field because the Device Sync Agent would have no way to contact an LDAP server for password information for the user.

4 Click **Save** to save the new setting(s).

5 Restart the Mobility Service:

```
rcgms restart
```

Modifying LDAP Information in Relation to Your Mobility System (Optional)

If you are using LDAP as your user source, you might need to change LDAP information over time.

- "Setting Up Multiple Mobility Administrator Users" on page 13
- "Searching Multiple LDAP Contexts for Users and Groups" on page 13
- "Enabling and Disabling SSL for the Mobility Service LDAP Connection" on page 14
- "Changing the LDAP Server for Provisioning and Authentication" on page 14
- "Updating the LDAP Password" on page 14
- "Accessing the Mobility Admin Console When the LDAP Server Is Inaccessible" on page 15
- "Configuring GroupWise LDAP Provisioning" on page 15

Setting Up Multiple Mobility Administrator Users

During installation, you establish the initial LDAP user who can access the Mobility Admin console. After installation, you can grant this right to additional users.

1. In a terminal window on the Mobility server, become `root` by entering `su -` and the root password.
2. Change to the following directory:

   ```
   /etc/datasync/configengine
   ```

3. Open the `configengine.xml` file in a text editor.
4. Locate the following section:

   ```
   <admins>
        <dn>cn=user_name,ou=organizational_unit,o=organization</dn>
   </admins>
   ```

   This section identifies the original Mobility administrator user that you established during installation.
5. Copy the line for the original Mobility user to a new line between the `<admins>` tags, then modify it as needed to identify an additional Mobility administrator user.
6. Save the `configengine.xml` file, then exit the text editor.
7. Restart the Mobility Service:

   ```
   rcgms restart
   ```

Searching Multiple LDAP Contexts for Users and Groups

During installation, you specify one LDAP container to search in order to get user information and another container to search in order to get group information. After installation, you can add more containers for the Mobility Admin console to search for users and groups when you need to add users and groups to your Mobility system.

IMPORTANT: Subcontainers are also searched, so you do not need to add them separately.

---

1. In the Mobility Admin console, click **Config** > **User Source**.
2. To search in an additional container for users, specify the container context in the text entry field under **Base User DNs**.
3. To search in an additional container for groups, specify the container context in the text entry field under **Base Group DNs**.
4. Click **Save** to save the new setting(s).
5. Restart the Mobility Service:

   ```
   rcgms restart
   ```

Enabling and Disabling SSL for the Mobility Service LDAP Connection

During installation, you chose whether to use SSL for the connection between the Mobility Admin console and the LDAP directory. You can change the setting after installation as needed.

1 In the Mobility Admin console, click **Config** > **User Source**.
2 Select or deselect **Secure** to enable or disable SSL.
3 In the **Port** field, adjust the port number as needed to match the port number used by the LDAP server.

   The default secure SSL port is 636. The default non-secure port is 389.
4 Click **Save** to save the new setting(s).
5 Restart the Mobility Service:

```
rcgms restart
```

Changing the LDAP Server for Provisioning and Authentication

During installation, you selected an LDAP server for the Mobility Admin console to communicate with when authenticating to the LDAP directory. You can change the LDAP server after installation as needed.

1 In the Mobility Admin console, click **Config** > **User Source**.
2 In the **IP Address** field, specify the IP address or DNS hostname of the LDAP server that you want to use for provisioning or authentication.
3 (Conditional) If needed for the new LDAP server, adjust the port number and secure SSL setting.

   The default secure SSL port is 636. The default non-secure port is 389.
4 (Conditional) If needed for the new LDAP server, adjust the LDAP base DNs for users and groups.
5 (Conditional) If needed for the new LDAP server, adjust the LDAP administrator DN and password.

   If you accidentally change any LDAP server information so that you are prevented from logging in to the Mobility Admin console using the new LDAP information, you can still log in using the `root` user name and password. For instructions, see "Accessing the Mobility Admin Console When the LDAP Server Is Inaccessible" on page 15.
6 Click **Save** to save the new setting(s).
7 Restart the Mobility Service:

```
rcgms restart
```

Updating the LDAP Password

If you change the administrator password on your LDAP server, you must reconfigure your Mobility server to match the new password.

1 (Conditional) If you cannot access the Mobility Admin console because the LDAP server password has already changed, follow the instructions in "Accessing the Mobility Admin Console When the LDAP Server Is Inaccessible" on page 15.
2 In the Mobility Admin console, click **Config** > **User Source**.
3 In the **Admin Password** field, specify the new password.

4 Click **Save** to save the new setting(s).

5 Restart the Mobility Service:

```
rcgms restart
```

Accessing the Mobility Admin Console When the LDAP Server Is Inaccessible

Occasionally, you might need to log in to the Mobility Admin console when the LDAP server is unavailable. At all times, you can log in to the Mobility Admin console using the `root` user name and password.

Configuring GroupWise LDAP Provisioning

GroupWise 18 LDAP provisioning can be used in place of the standard GroupWise provisioning. You configure GroupWise LDAP the same as you would regular LDAP in Mobility, but must use GroupWise for authentication. For information on enabling GroupWise LDAP on the MTA, see Configuring the LDAP Server Capabilities in the *GroupWise 18 Administration Guide*. The LDAP server must use SSL for provisioning to work. You also need to know the IP address of the MTA server where LDAP is enabled. Use the information below to setup GroupWise LDAP in Mobility:

- "Creating an Admin App in GroupWise" on page 15
- "Gathering the GroupWise Base DN" on page 16
- "Setting Up GroupWise LDAP Provisioning" on page 16

Creating an Admin App in GroupWise

You need to create an admin app for Mobility using the GroupWise Admin service. To create the admin app user, run the following curl command on your GroupWise primary domain server:

```
curl -k --user gw_sys_admin:admin_password -X POST -H "Content-Type:application/json" --data
"{\"name\":\"admin_app\",\"password\":\"admin_app_password\",\"description\":\"app_description\"}" https://GW_domain_ip:9710/gwadmin-service/system/adminapps
```

The following items need to be replaced in the curl command:

- **gw_sys_admin:** Specify your GroupWise system admin username.
- **admin_password:** Specify the password of your GroupWise system admin.
- **admin_app:** Specify a name for your admin app.
- **admin_app_password:** Specify a password for your admin app.
- **app_description:** Specify the purpose of the admin app. In this case it is for GMS.
- **GW_domain_ip:** Specify the IP address of your GroupWise primary domain server.

NOTE: If you are running this command on a Windows server, curl may not be available. You can download curl from here if needed.

The admin app is then used to authenticate to GroupWise LDAP. You need the admin app name and password. The name of the admin app needs to be specified in Mobility as follows:

```
cn=admin_app_user
```

Gathering the GroupWise Base DN

The Base DN is used to search for users and groups in LDAP. The Base DN is your GroupWise System Name which can be found in the GroupWise Admin console > **System** > **Information**. It is listed at the top of the pop up window as **Information -** ***system_name***. Using that, the Base DN should be specified as follows:

`o=`*`system_name`*

Setting Up GroupWise LDAP Provisioning

After you making sure create the admin app and get the system name, you are ready to configure GroupWise LDAP provisioning.

1 In the Mobility Console > Config > User Source, set Provisioning to LDAP.

IMPORTANT: Make sure Authentication is set to GroupWise.

2 Use the table below to enter in the GroupWise LDAP information:

Field	Value
IP Address	Enter the IP address of the MTA server.
Port	SSL Port used by GroupWise LDAP. The default GroupWise SSL port is 636.
Secure	Must be enabled as SSL must be used.
Admin Full DN	Enter in the admin app domain name as specified in Creating an Admin App in GroupWise. For example: cn=*admin_app*
Admin Password	Enter the admin app password.
Base User DNs	Enter the system name as specified in Gathering the GroupWise Base DN. For example o=*system_name*
Base Group DNs	Enter the system name as specified in Gathering the GroupWise Base DN. For example o=*system_name*

3 Click **Save**.

Adding GroupWise Users as Mobility Administrators

By default, when you use GroupWise as your Mobility system's user source, you must log in to the Mobility Admin console using the `root` user name and password.

You can configure the Mobility Service to allow specific users to log in using their GroupWise username and password. Then the `root` user name and password can continue to be used as well.

1. In a terminal window on the Mobility server, become `root` by entering `su -` and the root password.
2. Change to the following directory:

   ```
   /etc/datasync/configengine
   ```

3. Open the `configengine.xml` file in a text editor.
4. Add the following section:

   ```
   <gw>
      <admins>
          <username>GroupWise_Username</username>
          <username>GroupWise_Username</username>
      </admins>
      <enabled>true</enabled>
   </gw>
   ```

   Replace *GroupWise_Username* with the appropriate GroupWise user name. You can add as many GroupWise users as needed.
5. Save the `configengine.xml` file, then exit the text editor.
6. Restart the Mobility Service to put the new settings into effect:

   ```
   rcgms restart
   ```

Unlocking the Mobility Admin Console

As a security precaution, the Mobility Admin console locks you out if you give the wrong user name or password more than three times. Use the following command on the command line of the Mobility server to restart the Mobility Admin Service and release the lock on the console:

```
rcdatasync-webadmin restart
```

2 GroupWise Mobility System Management

When you install the GroupWise Mobility Service, your initial Mobility system is configured with default settings that are generally appropriate. After installation, you can customize your Mobility system configuration.

- "Starting and Stopping the GroupWise Mobility Service" on page 19
- "Using Autodiscover to Simplify Device Setup" on page 19
- "Controlling Synchronization Size Limits" on page 22
- "Using MCheck" on page 23
- "Maintaining the Mobility Database" on page 24
- "Backing Up Your Mobility System" on page 24
- "Changing the IP Address of the Mobility Server" on page 27
- "Providing Anonymous Feedback about Your Mobility System" on page 28

Starting and Stopping the GroupWise Mobility Service

1. In a terminal window on the Mobility server, become `root` by entering `su -` and the root password.
2. Use the following command to check the status of the Mobility Service:

   ```
   rcgms status
   ```

3. Use the following commands to manually start and stop the Mobility Service:

   ```
   rcgms start
   rcgms restart
   rcgms stop
   ```

Using Autodiscover to Simplify Device Setup

By default, mobile device users need to know the IP address or DNS hostname of the Mobility server in order to configure their email accounts on their devices. The Autodiscover Service enables you to configure DNS so that supported mobile devices are automatically redirected to the Mobility server so users only need to enter their email address. SSL must be configured for Autodiscover before you can configure Autodiscover.

- "Setting Up SSL for the Autodiscover Service" on page 20
- "Configuring Autodiscover" on page 20

Setting Up SSL for the Autodiscover Service

The functionality of the Autodiscover Service requires SSL. The following three conditions must be met:

- A valid and trusted SSL certificate must be available on the Mobility server and must be current (not expired).
- Mobile devices must be able to follow the certificate chain from the certificate on the Mobility server to the root CA certificate.
- The GMS servers need a wildcard cert or an SSL certificate with Subject Alternative Names (SANs) so that a single certificate is valid for all GMS servers. The SAN cert enables you to specify a list of hostnames that are protected by a single SSL certificate. For information about configuring GMS with a certificate, see Securing Communication between the Device Sync Agent and Mobile Devices.

Once the conditions have been met, continue with Configuring Autodiscover.

Configuring Autodiscover

When a mobile device presents an email address and tries to access your Mobility system, the Autodiscover Service uses a DNS CNAME record and SRV record in order to determine the IP address of the Mobility server, so that the device can log in.

To set up the Autodiscover Service, you must add the following to your DNS:

- CNAME record
- SRV record for Autodiscover
- SRV record for each internal GMS server

Use the tables below to create the DNS records:

Table 2-1 *CNAME record for Autodiscover*

Variable	Value	Example	Description
alias	`autodiscover`.*yourdomain*	autodiscover.acme.com	Set the alias to `autodiscover`.
canonical name	*your_gms_server.yourdomain* Or *your_external_nat/ port_forward.yourdomain*	gms.acme.com Or nat.acme.com	If your GMS server is accessible externally, enter in your GMS server host name. If you have multiple GMS servers, specify a server that becomes the master server and forwards users to the other servers. If you are using GMS servers with a NAT or port forward, specify the host name of the NAT or port forward.

Table 2-2 SRV record for Autodiscover

Variable	Value	Example	Description
service	`_autodiscover`	n/a	Set the service to `_autodiscover`.
protocol	`_tcp`	n/a	Set the protocol to `_tcp`.
port	443	n/a	Set the port to 443.
target	*your_gms_server.yourdomain* Or *your_external_nat/ port_forward.yourdomain*	gms.acme.com Or nat.acme.com	If your GMS server is accessible externally, enter in your GMS server host name. If you have multiple GMS servers, specify a server that becomes the master server and forwards users to the other servers. If you are using GMS servers with a NAT or port forward, specify the host name of the NAT or port forward.

The SRV record for Autodiscover should appear as follows when completed:

```
_autodiscover._tcp.acme.com
```

Table 2-3 SRV record for each internal GMS server

Variable	Value	Example	Description
service	`_ngms`	n/a	Set the service to `_ngms`.
protocol	`_tcp`	n/a	Set the protocol to `_tcp`.
port	443	n/a	Set the port to 443.
target	*your_gms_server.yourdomain*	gms.acme.com	Set the target to your GMS server.

The SRV records should appear as follows when completed:

```
_ngms._tcp.acme.com
```

IMPORTANT: Make sure you create a SRV record for each of your internal GMS servers. If you don't, Autodiscover cannot find the GMS servers.

Once Autodiscover has been configured, users can then enter their *username@yourdomain.com* to be redirected to the proper GMS box automatically.

Controlling Synchronization Size Limits

Synchronizing large quantities of data between GroupWise and mobile devices can put a substantial load on the sync agents. The GroupWise Sync Agent controls the maximum size of the individual attachments that can synchronize with an item to mobile devices. The Device Sync Agent controls the maximum size of an item (along with all attachments) that can synchronize to GroupWise.

- "Controlling Maximum Attachment Size from GroupWise to Mobile Devices" on page 22
- "Controlling Maximum Send Mail Size from Mobile Devices to GroupWise" on page 22

Controlling Maximum Attachment Size from GroupWise to Mobile Devices

By default, attachments are synchronized from GroupWise to the mobile devices if they are smaller than 500 KB. Attachments larger than 500 KB are dropped by the GroupWise Sync Agent and do not synchronize to mobile devices.

When a user receives an item on the mobile device for which attachments have not been synchronized from GroupWise, the item includes a list of the attachments that are on the original item but not on the synchronized item. This lets the user know that attachments are available in the GroupWise mailbox.

1. In the Mobility Admin console, click **Config**.
2. In the **Maximum Attachment Size** field, adjust the maximum attachment size as needed.

   This setting causes large attachments that exceed the size limit to be stripped from a message as it synchronizes from GroupWise to mobile devices. Small attachments that are within the size limit are still synchronized.
3. Click **Save** to save the new setting(s).
4. Restart the Mobility Service:

   ```
   rcgms restart
   ```

Controlling Maximum Send Mail Size from Mobile Devices to GroupWise

By default, if an item is larger than 500 KB when it is sent from a device, all attachments are stripped from the item before it is sent to GroupWise. In place of each stripped attachment, the user receives a text attachment indicating that the original attachment was stripped because of the size limit and what the size limit is.

1. In the Mobility Admin console, click **Config**.
2. In the **Maximum Send Mail Size** field, adjust the maximum message size as needed.

   This setting causes all attachments to be stripped from an item as it synchronizes from a mobile device to GroupWise if the size of the item plus all attachments exceeds the size limit.
3. Click **Save** to save the new setting(s).
4. Restart the Mobility Service:

   ```
   rcgms restart
   ```

Using MCheck

You can use MCheck to perform the following actions:

- Gather configuration settings for your Mobility system.
- Verify that the contents of the GroupWise Address Book have synchronized to the Mobility system.
- Verify the Mobility SSL configuration
- Verify that the contents of a GroupWise user's mailbox have synchronized to the Mobility system.
- Remove a user that was originally added using the Data Synchronizer Mobility Pack software to either the GroupWise Connector or the Mobility Connector, but not both.
- Remove old event configurations.
- Decouple group members from an LDAP group in Mobility.

To run MCheck:

1. In a terminal window on the Mobility server, become `root` by entering `su -` and the root password.
2. Change to the following directory:

   ```
   /opt/novell/datasync/tools/mcheck
   ```
3. Run the following command:

   ```
   python mcheck.pyc
   ```

   The main MCheck menu displays.

   ```
   1 System
   2 Users
   0 Exit

   Select Option:
   ```
4. Type the number for the action that you want to perform.

   ```
   1 System
     1 Get Mobility Configuration
     2 GroupWise System Address Book Check
     3 SSL Check

   2 Users
     1 Check User
     2 Remove Old Event Configurations
     3 Decouple LDAP Group Members
   ```
5. View the MCheck log file for results and recommendations.

A log file for each action is created in the following directory:

`/opt/novell/datasync/tools/mcheck/logs`

Action	Log File Name
Gather configuration settings	mobConfiguration_*dateTtime*.log
Verify the GroupWise Address Book	sab_*dateTtime*.log
Verify the user's mailbox	*username_dateTtime*.log
Veritfy the Mobility SSL settings	sslCheck_*dateTtime*.log
Remove event configurations	removeEventConfigurations_*dateTtime*.log
Decouple LDAP group members	decoupleLDAPGroup_*dateTtime*.log

Maintaining the Mobility Database

The Mobility Service database is a PostgreSQL database. As with any database, the Mobility Service database requires regular maintenance in order to perform reliably. If you are new to managing a PostgreSQL database, see "Routine Database Maintenance Tasks" (http://www.postgresql.org/docs/8.3/interactive/maintenance.html) on the PostgreSQL Documentation website for assistance.

Backing Up Your Mobility System

All of the user data that exists at any time in your Mobility system also exists in GroupWise. Therefore, if there is a problem with your Mobility system, you can always resynchronize in order to restore your user data to a current working state.

However, you can back up your entire Mobility system in order to preserve the Mobility Service software, configuration files, certificate files, and database.

- "Understanding What to Back Up" on page 24
- "Backing Up a Mobility System after Stopping It" on page 25
- "Backing Up a Mobility System While It Is Running" on page 26
- "Restoring Your Mobility System" on page 27

For additional details, see TID 7008163, "How to Back Up and Restore the Mobility Service" in the Novell Support Knowledgebase (http://www.novell.com/support).

Understanding What to Back Up

- Use your backup software of choice to back up the following directories on your Mobility server:

Directory	Description
/opt/novell/datasync	Mobility Service software
/etc/datasync	Configuration files
/var/lib/datasync	Certificate files

- Use a PostgreSQL-supported backup solution to back up the Mobility Service database in the following directory:

  `/var/lib/pgsql`

- Decide how you want to back up the data:
  - Backing Up a Mobility System after Stopping It
  - Backing Up a Mobility System While It Is Running

Backing Up a Mobility System after Stopping It

Stopping your Mobility system before backing it up is the safest way to ensure a completely consistent backup.

1. In a terminal window on the Mobility server, become `root` by entering `su -` and the root password.
2. Create a directory for storing your backup files, for example:

   ```
   mkdir /var/gmsbackup
   ```

3. Create a script similar to the following:

   ```
   #!/bin/bash
   # back up stopped Mobility system
   rcgms stop
   rcpostgresql stop
   #
   tar -czvpf /var/gmsbackup/pgsql.tgz /var/lib/pgsql
   tar -czvpf /var/gmsbackup/vardatasync.tgz /var/lib/datasync
   tar -czvpf /var/gmsbackup/optdatasync.tgz /opt/novell/datasync
   tar -czvpf /var/gmsbackup/etcdatasync.tgz /etc/datasync
   #
   rcpostgresql start
   rcgms start
   ```

   For example, you could create a script named `gmsbackup.sh` in the `/opt/novell/datasync` directory.
4. Add execute permissions to the backup script:

   `chmod +x` *`script_name`*`.sh`

5. Execute the backup script.
6. Change to the directory where you backed up the Mobility files to verify that the `.tgz` files were successfully created.

Backing Up a Mobility System While It Is Running

For convenience, you might want to back up your Mobility system while it is still running.

1 In a terminal window on the Mobility server, become `root` by entering `su -` and the root password.

2 Create a script to back up the Mobility Service database:

   2a Create a file named `.pgpass` in the `root` user's home directory (`/root`).

   2b Put the following contents in the `.pgpass` file.

   ```
   *:*:*:datasync_user:database_password
   ```

   The Mobility Service database user is `datasync_user`. The Mobility Service database password was established during installation.

   2c Create a database backup script similar to the following, using the `pg_dump` (http://www.postgresql.org/docs/8.4/static/app-pgdump.html) command to back up just the Mobility Service databases:

   ```
   #!/bin/bash
   # back up Mobility Service database
   pg_dump -U datasync_user mobility > /tmp/mobility.out
   pg_dump -U datasync_user datasync > /tmp/datasync.out
   /usr/bin/bzip2 /tmp/mobility.out
   /usr/bin/bzip2 /tmp/datasync.out
   ```

   For example, you could create a database backup script named `gmsdbbackup.sh` in the `/opt/novell/datasync` directory.

   2d Add execute permissions to the backup script:

   ```
   chmod +x script_name.sh
   ```

   2e Execute the backup script.

3 Create a script to back up the Mobility Service directories:

   3a Create a directory for storing your backup files, for example:

   ```
   mkdir /var/gmsbackup
   ```

   3b Use the following script to back up the rest of your Mobility system while it is sill running:

   ```
   #!/bin/bash
   # back up running Mobility system
   tar -czvpf /var/gmsbackup/vardatasync.tgz /var/lib/datasync
   tar -czvpf /var/gmsbackup/optdatasync.tgz /opt/novell/datasync
   tar -czvpf /var/gmsbackup/etcdatasync.tgz /etc/datasync
   ```

   For example, you could create a script named `gmsdirbackup.sh` in the `/opt/novell/datasync` directory.

   3c Add execute permissions to the backup script:

   ```
   chmod +x script_name.sh
   ```

   3d Execute the backup script.

   3e Change to the directory where you backed up the Mobility files to verify that the `.tgz` files were successfully created.

Restoring Your Mobility System

1. Change to the directory where you backed up the Mobility files.
2. Use the following `tar` command to restore the backed-up Mobility directories:

   ```
   tar -xzvf file_name.tgz
   ```

3. (Conditional) If you used the `pg_dump` (http://www.postgresql.org/docs/8.3/static/app-pgdump.html) command to back up the Mobility Service databases separately, use the `psql` (http://www.postgresql.org/docs/8.3/static/app-psql.html) command to restore it.

Changing the IP Address of the Mobility Server

For a Mobility system with just a small number of users on a single server, the simplest approach is to reinstall the Mobility Service software, and then have users reinitialize their mobile devices.

For a Mobility system with a large number of users, where having users reinitialize their mobile devices after reinstalling the Mobility Service software could be problematic, you can reconfigure your Mobility system with a new IP address, and then have users change the IP address that their mobile devices use to access the Mobility system.

- "Changing the IP Address for a Small Mobility System" on page 27
- "Changing the IP Address for a Large Mobility System" on page 27

Changing the IP Address for a Small Mobility System

1. Uninstall the Mobility Service software.

   For instructions, see "Uninstalling the Mobility Service" in the *GroupWise Mobility Service 18 Installation Guide*.
2. Change the IP address of the server.
3. Reinstall the Mobility Service software.

   For instructions, see "Running the Mobility Service Installation Program" in the *GroupWise Mobility Service 18 Installation Guide*.
4. Instruct your mobile device users to delete their accounts from their mobile devices, set them up using the new IP address, then reinitialize their mobile devices.

Changing the IP Address for a Large Mobility System

1. Stop the Mobility Service:

   ```
   rcgms stop
   ```

2. Change the IP address of the server.
3. Use MCheck to clear event configurations:

   3a In a terminal window on the Mobility server, become `root` by entering `su -` and the root password.

   3b Change to the following directory:

   ```
   /opt/novell/datasync/tools/mcheck
   ```

   3c Run the following command:

```
python mcheck.pyc
```

The main MCheck menu displays.

```
1 System
2 Users
0 Exit

Select Option:
```

3d Select **2 Users**.

3e Select **2 Remove Old Event Configuration**.

3f Enter the MAC address for the Mobility server whose IP address you changed.

MCheck reads all users on the Mobility server and retrieves their event configurations. If the MAC address you entered matches the MAC address in an event configuration, it removes the event configuration.

When MCheck is finished, the console displays 1) a list of all event configurations that were removed and 2) a total of all event configurations that were removed.

4 Start the Mobility Service:

```
rcgms start
```

5 Instruct your mobile device users to reconfigure their accounts with the new IP address.

Providing Anonymous Feedback about Your Mobility System

Micro Focus is striving to focus engineering efforts on the real-world needs of our GroupWise Mobility Service users. When you are willing to submit anonymous feedback from your Mobility system to Micro Focus, you assist in these efforts to improve Mobility Service performance.

When you enable anonymous feedback, a script runs daily to gather statistics about the usage of your Mobility system. The statistics are sent daily to Micro Focus.

You can enable and disable the sending of feedback at any time. You can review the usage data that has been collected before it is sent to Micro Focus.

- “Enabling/Disabling Anonymous Feedback” on page 28
- “Viewing the Collected Feedback” on page 29

Enabling/Disabling Anonymous Feedback

1. In the Mobility Admin console, click **Config**, then scroll down to the **Send Anonymous Feedback** field.
2. Select or deselect **Send Anonymous Feedback**.
3. Click **Save** to save the new setting(s).
4. Restart the Mobility Service:

```
rcgms restart
```

Viewing the Collected Feedback

You can feel comfortable about letting Micro Focus gather usage data from your Mobility system. The data is collected by the following script:

```
/opt/novell/datasync/tools/getstats.sh
```

The script is run by the following cron job:

```
/etc/cron.daily/gw-mobility-feedback
```

The cron job runs once a day at midnight. The results are stored in `*.gz` files in the following directory:

```
/var/log/datasync/configengine
```

The files are saved for 90 days and then deleted.

Use the following command to extract the data from a *.gz file:

```
tar xvfz gwmobility_stats_string_date_time.gz
```

By viewing the gathered usage data, you can assure yourself that no personal data of any kind is being collected by Micro Focus. The following is an example of the type of data that is collected:

```
GWMobilityVersion,SLESVersion,CPUCount,CPUType,SYSKBMemory,SYSType,
  GroupWiseEventUserCount,FolderItemAdd,ItemMarkRead,ItemMarkUnread,
  GWCAttachmentSize,MCAttachmentSize,TotalAttachments,Attachment1MB,Attachment2MB,
  Attachment3MB,Attachment4MB,Attachment5MBPlus,BlockedAttachments,MailFromDevice,
  ReadFromFromDevice,DeleteFromFromDevice,MoveFromFromDevice,UserCount,DevCount,
  DevPerUser2,DevPerUser3,DevPerUser0,DevPerUser1,DevPerUser4,DevPerUser5,
  DevPerUser6Plus,iPad,AndroidTablet,OtherDevices,iPhone,WindowsPhone,iPod,
  AndroidPhone,WindowsTablet,BlackBerry,WindowsOther,iOSOther,Android2,
  BlackBerryOther,BlackBerry10,iOS5,Windows8,iOS7,iOS6,Android5,Android4,
  Android3,AndroidOther,OtherOS

2.0.0.349,SLES11SP3,1,Intel(R)Core(TM)i7-2600CPU@3.40GHz,1017680,VMwareInc.,1,8,4,
  1,500,500,1,1,0,0,0,0,0,0,0,0,0,3,0,0,0,3,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,
  0,0,0,0,0,0,0,0,0,0
```

Thank you in advance for enabling Anonymous Feedback and submitting your Mobility system usage data to help improve the GroupWise Mobility Service.

3 GroupWise Sync Agent Configuration

After you have installed the GroupWise Mobility Service, you can refine the configuration of the GroupWise Sync Agent to meet your Mobility system's needs.

- "Monitoring and Configuring the GroupWise Sync Agent" on page 31
- "Selecting GroupWise Items to Synchronize" on page 32
- "Synchronizing Sticky Notes" on page 32
- "Synchronizing Shares" on page 33
- "Increasing GroupWise Sync Agent Reliability or Performance" on page 33
- "Ignoring Old GroupWise Items" on page 34
- "Clearing Accumulated GroupWise Events" on page 34
- "Changing the GroupWise Sync Agent Listening Port" on page 35
- "Enabling and Disabling SSL for POA SOAP Connections" on page 35
- "Matching GroupWise Configuration Changes" on page 35
- "Configuring the GroupWise Sync Agent with an External IP Address and Port" on page 36
- "Modifying or Preventing Synchronization of Specified Items by Using an XSLT Filter" on page 36

Monitoring and Configuring the GroupWise Sync Agent

You use the Mobility Admin console to monitor and configure the GroupWise Sync Agent.

1. In your web browser, access the Mobility Admin console at the following URL:

   `https://`*`mobility_server`*`_address:8120`

   Replace *mobility_server_address* with the IP address or DNS hostname of the server where the Mobility Service is installed.
2. Log in as the Mobility administrator (the LDAP Admin user that was set up during installation, or `root`).

   The sync agents should display a status of **Running**.
3. If the GroupWise Sync Agent is not running and does not start normally, refer to "GroupWise Sync Agent Troubleshooting" on page 96 for assistance.
4. In the Mobility Admin console, click **Config**, then click **GroupWise Sync Agent** to display the GroupWise Sync Agent Configuration page.

For more information about the Mobility Admin console, see Chapter 1, "GroupWise Mobility Administration Console," on page 9.

Selecting GroupWise Items to Synchronize

By default, all GroupWise items are synchronized to mobile devices.

1 In the Mobility Admin console, click **Config**, then click **GroupWise** to display the GroupWise Sync Agent Configuration page.

2 In the **GroupWise Items to Sync** section, select and deselect items as needed to configure the GroupWise Sync Agent to synchronize more items or fewer items.

3 Click **Save** to save the new setting(s).

4 Restart the Mobility Service:

```
rcgms restart
```

The following sections contain information about settings that can also affect item synchronization:

- "Ignoring Old GroupWise Items" on page 34
- "Controlling Maximum Item Synchronization" on page 42

Synchronizing Sticky Notes

The Sticky Notes option allows notes to be synchronized between mobile devices and GroupWise:

- *Mobile device*: Synchronizes notes created using the device's Notes app. The Notes app varies depending on the device operating system. On iOS devices, the native *Notes* app is supported. On Blackberry devices, the native *Remember* app is supported. On Android devices, the third-party *TouchDown* app and *Tasks and Notes for MS Exchange* app are supported.
- *GroupWise client*: Synchronizes Discussion Note and Personal Message items created in or moved to the *Mobile Notes* folder. GroupWise automatically creates the *Mobile Notes* folder when the Sticky Notes option is enabled. In some cases, the folder might be named *Notes* rather than *Mobile Notes*.

Sticky Notes synchronization is bidirectional. Notes that are created, modified, or deleted on the device are synchronized to the *Mobile Notes* folder. Discussion Note/Personal Message items that are created, modified, or deleted in the *Mobile Notes* folder are synchronized to the mobile device.

1 In the Mobility Admin console, click **Config**, then click **GroupWise** to display the GroupWise Sync Agent Configuration page.

2 In the **Sticky Notes** field, select **Enable** to synchronize Sticky Notes or deselect it to disable synchronization.

3 Click **Save** to save the new setting(s).

4 Restart the Mobility Service:

```
rcgms restart
```

The following sections contain information about settings that can also affect Sticky Note synchronization:

- "Ignoring Old GroupWise Items" on page 34
- "Controlling Maximum Item Synchronization" on page 42

Synchronizing Shares

The Shares option allows shared folder, calendars, and contacts to be synchronized between mobile devices and GroupWise. This option is disabled by default. To enable shares:

1. In the Mobility Admin console, go to Config > GroupWise.
2. Select Shares to enable synchronization.
3. Click Save.
4. Restart the Mobility Service:

   ```
   rcgms restart
   ```

When enabling shares, be aware of the following:

Requirements

- GroupWise 2014 R2 SP1 or later POAs are required for share owners and recipients to enable shares for users.

Known Limitations

- Share notifications can only be accepted in the GroupWise client.

General Information

- We recommend that you enable shares during off peak hours as shared data needs to be cached on the Mobility server.
- The Mobility server startup time might be slower with shares enabled. The amount the startup is slowed depends on the number of shared folders in your system.
- Dashboard alerts let you know if there is a problem with individual shares. Check the log files for more information.
- GroupWise share rights are enforced. Rights are enforced at the Mobility server and not on the device. For example, if a user doesn't have delete rights, a device delete appears to work. However, on the next device sync the deleted item is restored.
- Share owners do not need to be Mobility users.

Increasing GroupWise Sync Agent Reliability or Performance

If the GroupWise POA encounters an error and stops notifying the GroupWise Sync Agent about GroupWise events, GroupWise events stop synchronizing to mobile devices. By default, the GroupWise Sync Agent polls the POA for new events every 3600 seconds (1 hour).

You can configure how often the GroupWise Sync Agent polls the POA for events that have not yet been synchronized. Decreasing the poll cycle causes the GroupWise Sync Agent to poll more frequently, so that synchronization is more reliable. However, if you have a large number of users, you might want to increase the poll cycle in order to improve GroupWise Sync Agent performance.

1. In the Mobility Admin console, click **Config**, then click **GroupWise** to display the GroupWise Sync Agent Configuration page.
2. In the **Poll POA for Events** field, increase or decrease the poll cycle as needed.

   Set the poll cycle to 0 (zero) to disable the sweep cycle.
3. Click **Save** to save the new setting(s).

4 Restart the Mobility Service:

```
rcgms restart
```

Ignoring Old GroupWise Items

By default, the GroupWise POA does not transfer items to the GroupWise Sync Agent if they are older than 30 days. Typically, mobile device users have an even shorter time window during which they want items retained on their mobile devices. Allowing the GroupWise Sync Agent to accept items into your Mobility system that will ultimately be discarded by the Device Sync Agent is not an efficient use of system resources.

You can decrease this setting in order to decrease sync agent traffic for old items and to align more closely with the needs of mobile device users. If necessary, you can increase this setting to a maximum of 60 days.

1. In the Mobility Admin console, click **Config**, then click **GroupWise** to display the GroupWise Sync Agent Configuration page.
2. In the **Ignore Events After** field, increase or decrease the item age as needed.
3. Click **Save** to save the new setting(s).
4. Restart the Mobility Service:

```
rcgms restart
```

Clearing Accumulated GroupWise Events

When the GroupWise Sync Agent stops synchronizing for some reason, GroupWise events accumulate in users' GroupWise mailbox databases until the GroupWise Sync Agent resumes synchronization.

By default, when the GroupWise Sync Agent restarts, it processes all accumulated events. This default behavior prevents the loss of events and is the desired behavior for normal GroupWise Sync Agent functioning. However, when you are troubleshooting a problem with the GroupWise Sync Agent, you might find it helpful to skip processing accumulated events so that the GroupWise Sync Agent starts processing current events more quickly.

To clear old events (not recommended unless you are troubleshooting):

1. In the Mobility Admin console, click **Config**, then click **GroupWise** to display the GroupWise Sync Agent Configuration page.
2. In the **Clear Old Events** field, select **Enable**.

   This causes the GroupWise Sync Agent to discard accumulated events and start processing new events immediately. The discarded events are never processed.
3. Click **Save** to save the new setting(s).
4. Restart the Mobility Service:

```
rcgms restart
```

IMPORTANT: As soon as you are finished troubleshooting, return to the GroupWise Sync Agent Configuration page and deselect **Clear Old Events**, so that GroupWise events are not accidentally lost during normal GroupWise Sync Agent functioning.

Changing the GroupWise Sync Agent Listening Port

By default, the GroupWise Sync Agent communicates with the GroupWise POA using port 4500. If necessary, you can configure the GroupWise Sync Agent to use a different port.

1. In the Mobility Admin console, click **Config**, then click **GroupWise** to display the GroupWise Sync Agent Configuration page.
2. In the **Port** field, change the port number as needed.
3. (Conditional) If there is a firewall between the Mobility server and the POA server, make sure that the specified port is open.
4. Click **Save** to save the new setting(s).
5. Restart the Mobility Service:

   ```
   rcgms restart
   ```

Enabling and Disabling SSL for POA SOAP Connections

During installation, you chose whether to use SSL for connections between the GroupWise Sync Agent and the GroupWise POA. The default is to use SSL. You can change the setting after installation as needed. All of your POAs need to have SSL enabled or disabled

1. On the POA, enable or disable SSL as needed for the SOAP connection.
2. In the Mobility Admin console, click **Config**, then click **GroupWise** to display the GroupWise Sync Agent Configuration page.
3. In the **Secure** field, select **Enabled** to enable SSL.
4. Click **Save** to save the new setting(s).
5. Restart the Mobility Service:

   ```
   rcgms restart
   ```

Matching GroupWise Configuration Changes

Changes in your GroupWise system can require changes to the configuration of the GroupWise Sync Agent.

1. In the Mobility Admin console, click **Config**, then click **GroupWise** to display the GroupWise Sync Agent Configuration page.
2. Change GroupWise Sync Agent settings to match changes in your GroupWise system configuration as needed.

   If the POA is reconfigured to change whether it uses SSL, the **Enabled** must be changed in the **Secure** field.

   If you create a new trusted application, you must update both the trusted application name and key at the same time. When you copy in a new trusted application key, the new key is obfuscated when it is saved.
3. Click **Save** to save the new setting(s).
4. Restart the Mobility Service:

   ```
   rcgms restart
   ```

Configuring the GroupWise Sync Agent with an External IP Address and Port

On the GroupWise Sync Agent Configuration page in the Mobility Admin console, you specify the GroupWise Sync Agent server IP address and port for internal communication within your local network. However, you need to configure the GroupWise Sync Agent to use an external IP address and port for the following configurations:

- There is a firewall between the GroupWise Sync Agent and the POA that it communicates with.
- The GroupWise Sync Agent and the POA are located on two different logical networks with NAT (network address translation) between them.
- The GroupWise Sync Agent is running in a virtual machine.

To configure the GroupWise Sync Agent to use an external IP address and port:

1. In a terminal window on the Mobility server, become `root` by entering `su -` and the root password.
2. Change to the following directory:

```
/etc/datasync/configengine/engines/default/pipelines
                                     /pipeline1/connectors/groupwise
```

3. Open the `connector.xml` file in a text editor.
4. Add the following lines between the <custom> and </custom> tags:

```
<externalAddress>external_ip_address</externalAddress>
<externalPort>external_port_number</externalPort>
```

5. Replace *external_ip_address* and *external_port_number* with the IP address and port number for the GroupWise Sync Agent to communicate with the POA across whatever network configuration lies between them.
6. Save the `connector.xml` file, then exit the text editor.
7. Restart the Mobility Service:

```
rcgms restart
```

Modifying or Preventing Synchronization of Specified Items by Using an XSLT Filter

If you are familiar with XSLT, you can configure the GroupWise Sync Agent to modify or drop specified items. The sample filter below drops items that contain a specified subtype or that have a subject equal to a specified string. With a little XSLT knowledge, you can modify this sample filter to meet your needs.

1. Create the following directory:

```
/var/lib/datasync/groupwise/filter
```

2 Copy the following sample filter into a text editor:

```
<?xml version='1.0' encoding='utf-8'?>

<xsl:stylesheet version='1.0' xmlns:xsl='http://www.w3.org/1999/XSL/
                                                            Transform'>

<xsl:variable name="subtype" select="//*[local-name()='subType']"/>
<xsl:variable name="subject" select="//*[local-name()='subject']"/>
<xsl:template match="node()|@*">
  <xsl:if test="not(contains($subtype, 'SearchText') or
                contains($subtype, 'SearchText') or
                ($subject = 'put_the_subject_here'))">
    <xsl:copy>
      <xsl:apply-templates select="node()|@*"/>
    </xsl:copy>
  </xsl:if>
</xsl:template>

</xsl:stylesheet>
```

This sample file is available in the following location:

```
/opt/novell/datasync/syncengine/connectors/groupwise/filter/
                                                  sourceCustomExample.xslt
```

3 Save the text file as `sourceCustomSample.xslt` in the new `groupwise/filter` directory that you created in Step 1.

4 Modify the file to identify the items that you want the GroupWise Sync Agent to drop.

5 Save the `sourceCustomSample.xslt` file, then exit the text editor.

6 When you are ready to put the new filter into effect, rename `sourceCustomSample.xslt` to `sourceCustom.xslt`, then restart the GroupWise Sync Agent.

7 (Conditional) If you need to remove the new filter, rename the `sourceCustom.xslt` file to a different name, then restart the GroupWise Sync Agent.

4 Device Sync Agent Configuration

After you have installed the GroupWise Mobility Service, you are ready to refine the configuration of the Device Sync Agent to meet your Mobility system's needs.

- "Monitoring and Configuring the Device Sync Agent" on page 39
- "Blocking/Unblocking All Incoming Devices" on page 40
- "Enabling a Device Password Security Policy" on page 40
- "Quarantining New Devices to Prevent Immediate Connection" on page 41
- "Controlling the Maximum Number of Devices per User" on page 42
- "Removing Unused Devices Automatically" on page 42
- "Controlling Maximum Item Synchronization" on page 42
- "Binding to a Specific IP Address" on page 43
- "Enabling and Disabling SSL for Device Connections" on page 43
- "Changing the Address Book User" on page 43

Monitoring and Configuring the Device Sync Agent

You use the Mobility Admin console to monitor and configure the Device Sync Agent.

1 In your web browser, access the Mobility Admin console at the following URL:

   `https://mobility_server_address:8120`

   Replace *mobility_server_address* with the IP address or DNS hostname of the server where the Mobility Service is installed.

2 Log in as the Mobility administrator (the LDAP Admin user that was set up during installation, or `root`).

   The sync agents should display a status of **Running**.

3 If the Device Sync Agent is not running and does not start normally, refer to "Device Sync Agent Troubleshooting" on page 98 for assistance.

4 In the Mobility Admin console, click **Config**, then click **Device Sync Agent** to display the Device Sync Agent Configuration page.

For more information about the Mobility Admin console, see Chapter 1, "GroupWise Mobility Administration Console," on page 9.

Blocking/Unblocking All Incoming Devices

You can prevent all users from connecting their devices to the Mobility system, and then allow access when you are ready. This is helpful when you are installing an update to the Mobility Service software.

1. In the Mobility Admin console, click **Config**, then click **Device** to display the Device Sync Agent Configuration page.
2. Deselect **Enable** in the **Allow Connections** field.
3. Click **Save** to save the new setting(s).
4. Restart the Mobility Service:

   ```
   rcgms restart
   ```

5. When you are ready to allow access again, select **Enable** in the **Allow Connections** field, then restart the Mobility Service.

NOTE: Whenever you block or unblock a device, notify the device owner of the change in device status.

Occasionally, you might encounter synchronization problems with specific users or devices. For example, a problem with a specific user or device might start to consume an inappropriately large amount of system resources on your Mobility server. If this occurs, see "Blocking/Unblocking Specific Devices" on page 63 for assistance with resolving the problem.

Enabling a Device Password Security Policy

As an administrator, you can control several aspects of the behavior of mobile devices that connect to your Mobility system. By establishing a security policy for the passwords that users set on their mobile devices, you help prevent unauthorized access to your Mobility system from lost or misplaced devices.

1. In the Mobility Admin console, click **Config**, then click **Device** to display the Device Sync Agent Configuration page.
2. Select **Enable** in the **Device Security Policy** field.

   When you enable the security policy, users are informed of the specific security settings that are in effect when they create their mobile device accounts and set their device passwords. Users are prevented from configuring their mobile devices to connect to the Mobility system without following the security policy you establish.

   If a user's device uses another locking method, like a lock pattern, that method is overridden by the Mobility system's device password security policy when they attempt to connect for the first time.

   NOTE: When mobile devices connect for the first time to a system that has been updated from the Data Synchronizer Mobility Pack to GroupWise Mobility Service 18, some devices automatically switch from ActiveSync 2.5 to 16. When this occurs, some devices prompt users to accept a new "security policy," which can sound like a substantial change. In reality, no substantial change is being made, and users should simply accept the "policy" when prompted.

   ---

3. Set the security policy options as needed for the level of device password security that you want for your Mobility system:

Both Letters and Numbers: By default, any combination of characters is permitted in device passwords. Enable this option to require device passwords that include at least one letter, one number, and one special character.

Minimum Password Length: By default, the user can set a device password of any length. Enable this option to specify the minimum number of characters required in device passwords. The minimum value is 0; the maximum value is 18. If you specify 0, the security policy does not require the user to set a password on the device.

Inactivity Time: By default, the mobile device does not lock itself in the absence of user activity. Enable this option to specify the number of minutes after which a mobile device locks itself when no user activity occurs.

Reset Device after Failures: By default, an external Reset command must be sent to the mobile device in order to wipe personal data from it. Enable this option to specify the number of failed password attempts after which the mobile device automatically resets itself to factory default settings.

4. Click **Save** to save the new setting(s).
5. Restart the Mobility Service:

```
rcgms restart
```

Quarantining New Devices to Prevent Immediate Connection

By default, when a user configures a new mobile device to synchronize GroupWise data, the device can immediately connect to your Mobility system and start synchronizing data. If you prefer, you can configure your Mobility system to prevent new devices from connecting until you allow access.

1. In the Mobility Admin console, click **Config**, then click **Device** to display the Device Sync Agent Configuration page.
2. Select **Enable** in the **Quarantine New Devices** field so that new devices cannot connect to your Mobility system until you allow them to.
3. Click **Save** to save the new setting(s).
4. Restart the Mobility Service:

```
rcgms restart
```

5. Configure the Mobility Service to notify you when users connect new devices.

   For instructions, see "Enabling System and Service Notifications" on page 47.
6. Skip to "Releasing a New Device from the Quarantine" on page 64.

Controlling the Maximum Number of Devices per User

When a single user has multiple devices, the user's data is duplicated in your Mobility system. To control data duplication and improve performance, you can control the number of devices that each user is allowed to connect to your Mobility system.

By default, each user can connect to your Mobility system with as many devices as he or she wants. When you set the maximum limit, a user who is above the limit is not prevented from connecting with existing devices. However, the user cannot connect with any additional devices until the number of devices is within the limit that you have set.

1. In the Mobility Admin console, click **Config**, then click **Device** to display the Device Sync Agent Configuration page.
2. In the **Maximum Devices per User** field, set the maximum number of devices that each user can connect with.

   To remove an existing limit, delete the number for an unlimited number of devices.
3. Click **Save** to save the new setting(s).
4. Restart the Mobility Service:

   ```
   rcgms restart
   ```

Removing Unused Devices Automatically

By default, mobile devices that have not connected to your Mobility system for 30 days are automatically removed from your Mobility system. You can change the time interval after which unused devices are automatically removed.

NOTE: To remove a device immediately, see "Deleting a Device" on page 65.

---

1. In the Mobility Admin console, click **Config**, then click **Device** to display the Device Sync Agent Configuration page.
2. In the **Remove Unused Devices** field, adjust the number of days as needed to control the proliferation of unused devices.
3. Click **Save** to save the new setting(s).
4. Restart the Mobility Service:

   ```
   rcgms restart
   ```

Controlling Maximum Item Synchronization

Users can configure their mobile devices to request synchronization for all email and calendar items. However, you might not want to allow users to synchronize that much data.

By default, users are allowed to synchronize a maximum of 30 days of email and 180 days of calendar items. You can set the allowed maximums higher or lower as needed.

1. In the Mobility Admin console, click **Config**, then click **Device** to display the Device Sync Agent Configuration page.
2. In the **Maximum Email Sync Limit** field, adjust the maximum number of days for email.

   This setting also applies to Sticky Notes.

3 In the **Maximum Calendar Sync Limit** field, adjust the maximum number of days for calendar items.

   The maximum settings for these fields is 730 days (2 years).

   If users try to configure their mobile devices to synchronize more days of data than you have allowed, they receive a warning message.

4 Click **Save** to save the new setting(s).

5 Restart the Mobility Service:

```
rcgms restart
```

Binding to a Specific IP Address

By default, the Device Sync Agent uses all available IP addresses on the Mobility server. You can reconfigure the Device Sync Agent to use only one specific address.

1 In the Mobility Admin console, click **Config**, then click **Device** to display the Device Sync Agent Configuration page.

2 In the **IP Address** field, specify the IP address that you want to bind the Device Sync Agent to.

   The default of `0.0.0.0` indicates that the Device Sync Agent is not bound to a specific IP address.

3 Click **Save** to save the new setting(s).

4 Restart the Mobility Service:

```
rcgms restart
```

Enabling and Disabling SSL for Device Connections

During Mobility Service installation, you chose whether to use SSL for connections between the Device Sync Agent and mobile devices. By default, the Device Sync Agent uses a secure SSL connection on port 443. You can change the setting after installation as needed.

1 In the Mobility Admin console, click **Config**, then click **Device** to display the Device Sync Agent Configuration page.

2 Select or deselect **Enable** in the **Secure** field to change whether SSL is in use.

3 Click **Save** to save the new setting(s).

4 Restart the Mobility Service:

```
rcgms restart
```

Changing the Address Book User

The Device Sync Agent accesses the GroupWise Address Book to obtain contact information for synchronization to mobile devices. The Device Sync Agent can obtain the information it needs by logging in as any valid GroupWise user. An initial Address Book user was specified during installation. You might want to change to a different user for whom either more or fewer contacts are visible in the GroupWise Address Book.

NOTE: The Device Sync Agent uses this user name only to access and search the GroupWise Address Book. It does not use this user name to access any personal aspects of the specified user's mailbox.

1. In the Mobility Admin console, click **Config**, then click **Device** to display the Device Sync Agent Configuration page.
2. In the **Address Book User** field, specify the GroupWise user name of the user whose view of the GroupWise Address Book best meets the needs of your mobile device users.
3. Click **Save** to save the new setting(s).
4. Restart the Mobility Service:

   ```
   rcgms restart
   ```

5 GroupWise Mobility System Monitoring

GroupWise mobile device users rely on their devices for many aspects of their professional and personal lives. By carefully monitoring your Mobility system, you can keep device synchronization functioning quickly and reliably.

- "Using the Mobility Dashboard" on page 45
- "Enabling System and Service Notifications" on page 47
- "Monitoring User Status" on page 47
- "Monitoring Device Status" on page 49
- "Monitoring Disk Space Usage" on page 50
- "Working with Log Files" on page 51
- "Monitoring GroupWise SOAP Processing" on page 54

Using the Mobility Dashboard

The Mobility Dashboard provides statistics about the functioning of your Mobility system. At the same time, colorful indicators draw your attention to those details that matter most.

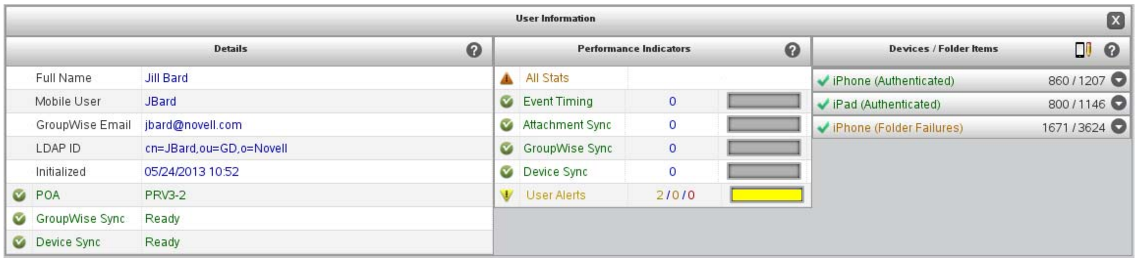
- "Exploring the Dashboard" on page 45
- "Configuring Dashboard Data Retention" on page 46

Exploring the Dashboard

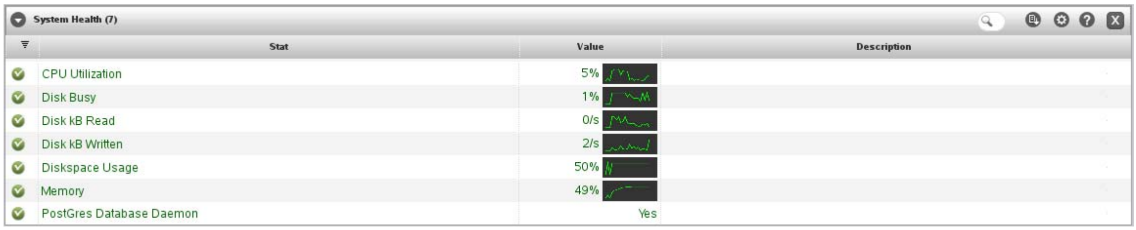
1 In the Mobility Admin console, click **Dashboard**.

The initial three panels provide high-level information about your Mobility system.

2 Click **Users**, then click a specific user to open three additional panels with user-specific information.



3 Click a specific type of information in any panel to open the **Listing** panel to display detailed statistics.



4 Click the **Listing** drop-down menu on the left side of the **Listing** panel header to select a specific listing or to create a customized listing view.

When you customize a listing in any way, the customization remains until you log out of the Admin console.

5 Click a graph in a listing to display a large, detailed version of the graph.

6 Click **Help** in any panel for explanations of all the statistics and graphs.

7 Click **Search Filter** on the right side of the **Listing** panel header, type a search string, then press Enter to restrict the content of the listing.

8 Click **Export Table** to export the listing to a CSV file for use in a spreadsheet program.

9 Click Configure Columns to select the columns to display in the listing.

In addition to the Dashboard, the Mobility Admin console provides the User page for monitoring synchronization of users and devices. For usage instructions, see:

- "Monitoring User Status" on page 47
- "Monitoring Device Status" on page 49

Configuring Dashboard Data Retention

The Dashboard continuously collects data about your Mobility system to produce the indicators and statistics listings that it displays. You can configure how long alerts remain active and how long historical data for graphs is stored.

1 In the Mobility Admin console, click **Config**.

2 In the **Alert Retention** field, adjust how long you want alerts to display.

By default, alerts are retained for 14 days or until you manually delete them.

3 In the **Statistic History Retention** field, adjust how long you want the data used to generate graphs to be stored.

By default, the historical data used to generate the graphs is retained for 30 days.

4 Click **Save** to save the new setting(s).

5 Restart the Mobility Service:

```
rcgms restart
```

Enabling System and Service Notifications

You can configure the Mobility system to notify specified users when critical situations arise that require administrator attention.

1 In the Mobility Admin console, click **Config**.
2 In the **Notification Enabled** field, select **Enabled**.
3 Fill in the following fields:

   SMTP IP Address: Specify the IP address of an SMTP host for sending email. This could be a GroupWise GWIA server, but you can also use another email system such as sendmail on a Linux server or a personal email account.

   SMTP Port: The port number on which the Mobility Service can communicate with the SMTP host.

   Authentication User Name: The email user name to send the notification messages from.

   Authentication User Password: (Conditional) The email password if one is required on the email account.

   System Notifications: A comma-delimited list of email addresses to send a notification to when the Mobility server encounters a critical (red) alert or condition.

   Service Notifications: A comma-delimited list of email addresses to send a notification to when a new device needs to be released from the quarantine.

   For more information about the quarantine, see "Quarantining New Devices to Prevent Immediate Connection" on page 41 and "Releasing a New Device from the Quarantine" on page 64.
4 Click **Save** to save the new setting(s).
5 Restart the Mobility Service:

```
rcgms restart
```

Monitoring User Status

The Users page helps you monitor synchronization progress as data transfers from GroupWise through the GroupWise Sync Agent to the Device Sync Agent in preparation for transfer to mobile devices.

1 In the Mobility Admin console, click **Users**.

   A **Group** icon to the left of a **User** icon shows that the user was added to your Mobility system as a member of an LDAP group. If you mouse over the Group icon, the name and context of the group displays.

   A synchronized resource is identified with the **Resource** icon.
2 Check the **User State** column for each user.

   The **User State** column displays the following states that indicate the progress of initial synchronization from GroupWise into the Mobility system:

User State	Explanation
Queued	The initial synchronization process from GroupWise to the Mobility system has not yet started for this user.

User State	Explanation
Syncing-Init	The initial synchronization process is in progress. As many as four users can be synchronizing at once. As one user is finished, initial synchronization for the next user starts.
Sync-Validate	The Mobility system has received all of the user's GroupWise data, and is in the process of comparing the data in the Mobility system with the data in GroupWise to verify the completeness of the data transfer.
Synced	The initial synchronization process is complete.
Syncing-Days+	After initial synchronization, users can request more email in addition to the default of the email in the Mailbox folder for the last three days.
Syncing-PAB	The Mobility system is synchronizing the user's Personal Address Book.
Blocked	The specific user is currently blocked from connecting any devices.
Failed	The initial synchronization process has failed. For failed users, the GroupWise Sync Agent automatically retries as many as four times after all other users have been synchronized.
Delete	The user is in the process of being deleted from your Mobility system. If the user has a large amount of data and attachments in the system, the deletion process can take some time.
Re-Init	The user is in the process of being reinitialized. During reinitialization, the user's GroupWise data is deleted from the Mobility system and is requested again from the GroupWise system. If the user has a large amount of GroupWise data and attachments, the reinitialization process might take a long time.

See also "Monitoring Device Status" on page 49.

3. (Condition) For users in the **Queued** state, be patient until the state progresses from **Queued** to **Syncing** to **Synced**.
4. (Conditional) For users in the **Syncing** state, refresh the Users page until the status changes to **Synced**.
5. (Conditional) For users in the **Synced** state, notify the users to configure their mobile devices to connect to the Mobility system.

   After users have configured their mobile devices to connect to the Mobility system, they can configure their devices to synchronize additional items beyond the defaults. For more information about initial synchronization, see "Managing Initial Synchronization of Users" in the *GroupWise Mobility Service 18 Installation Guide*. For such users, their **Synced** state can change to **Syncing** again as additional items are retrieved, and then return to **Synced** when the additional synchronization is finished.
6. (Conditional) If a user is in the **Blocked** state because all of his or her devices are blocked, click **Unblock Device** in the **User Actions** column to unblock the user and all devices.

   For more information, see "Blocking/Unblocking All Incoming Devices" on page 40 and "Blocking/Unblocking Specific Devices" on page 63.

7 (Conditional) If a user is in the **Failed** state:

7a Click the user name to display the User/Device Actions page.

7b In the **Actions** column, click .

Reinitialization deletes the user from the Device Sync Agent, adds the user again, then starts the synchronization process over from the beginning.

7c (Conditional) If reinitializing the user still does not allow the user to connect, delete the user from the Mobility system, then re-add the user.

For instructions, see "Managing Mobile Device Users" on page 55.

7d Click **Users** to return to the Users page.

8 To display more detailed user status, click **Dashboard**, then click **Users**.

For more information about the Dashboard, see "Using the Mobility Dashboard" on page 45.

Monitoring Device Status

After GroupWise data has successfully transferred from GroupWise into the Mobility system, the Device Sync Agent is then responsible for transferring the data to and from mobile devices.

1 In the Mobility Admin console, click **Users**.

2 Check the **Device State** column for each user.

If there are multiple lines in the **Device State** column. the user has multiple devices. Hover over the device state icon to display the device ID.

The **Device State** column displays the following states that indicate the status of each device's connection to the Mobility system:

Device State	Explanation
Never Connected	The user has not yet configured the device to connect to the Mobility system. Device synchronization has not yet begun.
Normal	The device has successfully connected to the Mobility system and synchronization to the device is complete.
Blocked	The device is being prevented from connecting to the Mobility system for either of these conditions: ◆ All devices have been prevented from connecting by using the Block All Devices setting on the Device Sync Agent Configuration page. ◆ An individual device has been manually blocked on the User/Device Actions page because it was having a problem that was adversely affecting the Mobility system.

Device State	Explanation
Quarantined	A new device is being prevented from connecting until you release it from the device quarantine.
Resetting	A Reset command has been sent to a device in order to wipe all personal data from it.
Reset	The device has acknowledged the Reset command and has been successfully wiped.

See also "Monitoring User Status" on page 47.

3 (Optional) In the **Search** field, type all or part of a user's first name, last name, or GroupWise user name to filter the list.

4 (Optional) Use the drop-down menu to the right of the **Search** field to filter the list by device state.

5 Click the user name of the device owner to display the User/Device Actions page.

For each device, the device type, device operating system, ActiveSync version, and time of last synchronization are listed. The **Device State** column displays the same states that are displayed on the User page.

6 (Conditional) If a device is in the **Blocked** state, click **Unblock Device** in the **Device Actions** column to unblock the device.

For more information, see "Blocking/Unblocking All Incoming Devices" on page 40 and "Blocking/Unblocking Specific Devices" on page 63.

7 (Conditional) If a device is in the **Quarantined** state, click **Allow Device** to release the device from the quarantine.

For more information about the quarantine, see "Quarantining New Devices to Prevent Immediate Connection" on page 41 and "Releasing a New Device from the Quarantine" on page 64.

8 To display more detailed device information, such as the last time each device connected to your Mobility system, click **Dashboard**, then click **Devices**.

If a device has not connected to the Mobility system for 30 days, the nightly maintenance process automatically removes the inactive device from the Mobility system.

For more information about the Dashboard, see "Using the Mobility Dashboard" on page 45.

9 (Optional) Click **Folder List** to display the totals of pending and synchronized items in each folder in the user's GroupWise mailbox.

This information is helpful when troubleshooting a synchronization problem for the user.

Monitoring Disk Space Usage

Every effort should be made to provide adequate disk space on the Mobility server. An abnormal shutdown because of insufficient disk space can result in data loss in your Mobility system.

The `datasync-diskcheck.sh` script runs automatically along with the Mobility Service and monitors disk space usage in the `/var` partition where log files are stored.

IMPORTANT: If disk space usage exceeds 90%, the script shuts down the Mobility Service normally, to prevent the potential data loss associated with an abnormal shutdown.

The `datasync-diskcheck.sh` script runs every hour. When it detects a low disk space condition, it writes an entry to the `/var/log/datasync/datasync_status` log file. No other notification of the condition is provided before the script shuts down the Mobility Service.

After a low disk space condition occurs, you can do one or more of the following things to prevent future problems:

- Improve your database maintenance practices. See "Maintaining the Mobility Database" on page 24.
- Remove old log files. For the location of log files, see "Working with Log Files" on page 51.
- Add more disk space to the Mobility server.

Working with Log Files

Log files provide useful information about the functioning of the various Mobility system components.

- "Understanding Log Files" on page 51
- "Setting the Log Level" on page 52
- "Configuring Log File Rotation" on page 52
- "Gathering Log Files for Technical Services" on page 53

Understanding Log Files

The Mobility Service components generate a set of log files that are created in subdirectories under the following directory:

`/var/log/datasync`

The log file subdirectories under `/var/log/datasync` and the log file names are as follows:

Internal Mobility Service Component	Log File Subdirectory under /var/log/datasync	Log File Name
Sync Engine	`syncengine`	`engine.log`
Config Engine	`configengine`	`configengine.log`
Web Admin	`webadmin`	`server.log`
Connector Manager	`syncengine`	`connectorManager.log`

Sync Agents	`connectors`	`groupwise-agent.log`
		`groupwise.log`
		`mobility-agent.log`
		`mobility.log`

Use the following command to check the most recent additions to a log file:

```
tail -f log_file_name.log
```

Setting the Log Level

All Mobility log files use the same log level, which you set on the General page in the Mobility Admin console.

1 In the Mobility Admin console, click **Config**.

2 In the **Log Level** field, select from the following log levels:

   - **Info:** Logs informational messages about normal synchronization processing. This log level is suitable for a Mobility administrator who wants to observe the functioning of the Mobility system.

     Info is the default log level and is strongly recommended because it balances the amount of data logged, the amount of disk space required for log files, and the load on the Mobility system.

   - **Debug:** Logs large quantities of developer-level data. This log level is appropriate for troubleshooting purposes. It puts a heavy load on the Mobility system and should be used only until the troubleshooting activities are completed.

   - **Warning:** Logs problems that should not adversely affect synchronization processing but should be investigated and resolved for optimum performance. This log level can be appropriate for a smoothly running Mobility system where you only want to be notified of warnings and errors.

   - **Error:** Logs error messages that indicate critical problems in synchronization processing. This log level puts the least load on the Mobility system because it logs only critical errors, but it does not log sufficient data to help resolve any errors that occur.

3 Click **Save** to save the new setting(s).

4 Restart the Mobility Service:

```
rcgms restart
```

TIP: The user interface instructs you to restart the Mobility Service, because this is required for all other settings on this page. However, if you only change the log level, you do not need to restart the Mobility Service. The sync agents immediately put the new log level into effect.

Configuring Log File Rotation

The Mobility log files are automatically compressed and rotated by a `logrotate cron` job. The schedule is set by the `DAILY_TIME="00:30"` line in the `/etc/sysconfig/cron` file, which means that the log files are checked at 12:30 a.m. each night. Any Mobility log files that have exceeded 4 MB in size are compressed and rotated at that time. After 30 days or 99 instances of each log file have accumulated, the oldest log file is deleted when a new log file is created.

Log rotation is controlled by the following files:

```
/etc/logrotate.d/datasync-syncengine
/etc/logrotate.d/datasync-configengine
/etc/logrotate.d/datasync-webadmin
/etc/logrotate.d/datasync-monitorengine
```

By default, `gzip` is used to compress old log files. You can change the compression method by changing the following line in the files listed above:

```
compresscmd /usr/bin/gzip
```

For example, to change from gzip (http://en.wikipedia.org/wiki/Gzip) compression to bz2 (http://en.wikipedia.org/wiki/Bzip2) compression, use the following line:

```
compresscmd /usr/bin/bzip2
```

Using bz2 compression produces smaller log files but uses more system resources during compression.

For more information, see the Linux logrotate (http://linux.about.com/od/commands/l/blcmdl8_logrota.htm) command.

Gathering Log Files for Technical Services

The supportconfig tool provided by Technical Services gathers information about your Mobility system to help them resolve issues with which you require assistance. It is provided as part of the SUSE Linux Enterprise Server 11 operating system. You can also use it for your own troubleshooting activities.

Each component of your Mobility system (sync agents, engines, and so on) has a supportconfig plug-in that gathers information specific to its functioning. The following information is gathered:

- The component's configuration file with security information, such as passwords, stripped out
- The component's current log file
- The component-specific script that supportconfig ran to collect the information

To run supportconfig for your own troubleshooting activities:

1 In a terminal window on the Mobility server, become root by entering su - and the root password.

2 Enter the following command:

```
supportconfig
```

The supportconfig tool examines the server very thoroughly and lists its findings. The tool then zips all the data it collected into the following file:

/var/log/nts_*servername_yymmdd_hhss*.tbz

This file name identifies the server and the time stamp for the files that supportconfig has collected.

3 Examine the files that supportconfig collected:

3a Copy the .tbz file to a convenient temporary directory.

3b Use the following command to unzip the compressed file into the set of text files that hold the findings produced by the supportconfig tool:

tar xjf *file_name*.tzb

4 View each .txt file to see the configuration file, current log file, and script file for each Mobility component.

For more information, see supportconfig for Linux (http://www.novell.com/communities/node/2332/supportconfig-linux).

Monitoring GroupWise SOAP Processing

The GroupWise Sync Agent uses the SOAP protocol to communicate with the GroupWise POA. GroupWise includes tools for monitoring those SOAP connections.

- "Using the GroupWise POA Web Console" on page 54
- "Using GroupWise Monitor" on page 54

Using the GroupWise POA Web Console

The POA web console provides information about SOAP events that are passing between the GroupWise Sync Agent and the POA. For more information, see Monitoring SOAP Events in the *GroupWise 18 Administration Guide*.

Using GroupWise Monitor

GroupWise Monitor can be configured to notify you when a POA is running out of SOAP threads. When you receive the notification, you can restart the POA. Configure GroupWise Monitor to notify you when the `poaSOAPThreadBusy` variable exceeds a threshold of 20. For more information, see Configuring Email Notification for Agent Problems in the *GroupWise 18 Administration Guide*.

6 GroupWise Mobility User Management

You can add GroupWise users, groups of users, and GroupWise resources to your GroupWise Mobility system. Some aspects of GroupWise system management affect management of mobile device users.

- "Managing Mobile Device Users" on page 55
- "Managing Groups of Users" on page 58
- "Managing Synchronized Resources" on page 59
- "Managing Changes in the GroupWise System" on page 60

Managing Mobile Device Users

You should add GroupWise users to your Mobility system when they express the need to synchronize their GroupWise data to their mobile device.

IMPORTANT: Do not add GroupWise users to your Mobility system who do not have a current need for data synchronization. When you add a user to your Mobility system, GroupWise data continually synchronizes from GroupWise into your Mobility system. If that data is not being used on a mobile device, that synchronization produces unnecessary overhead in your Mobility system.

- "Adding Individual Users" on page 55
- "Adding Users through an LDAP Group or a GroupWise Group" on page 56
- "Customizing a User's Synchronization Settings" on page 57
- "Setting GroupWise User Names for LDAP Users (Optional)" on page 57
- "Deleting a User" on page 57

For information about new, moved, and deleted GroupWise users, see "Managing Changes in the GroupWise System" on page 60.

Adding Individual Users

During installation of the Mobility Service, you selected the source (LDAP or GroupWise) from which users and groups of users can be added to your Mobility system. For background information, see "Selecting the User Source for Your Mobility System" in the *GroupWise Mobility Service 18 Installation Guide*.

If you selected LDAP as your user source, you specified one LDAP user container in your LDAP directory. By default, the Mobility Admin console searches that LDAP container and its subcontainers for users to add to your Mobility system. After installation, you can configure the Mobility Admin console to search additional LDAP containers for users to add. For setup instructions, see "Searching Multiple LDAP Contexts for Users and Groups" on page 13.

If you selected GroupWise or are using GroupWise LDAP as your user source during installation, all users in the GroupWise Address Book are available to add to your Mobility system.

Adding users individually is appropriate for a small number of users. Maintenance of large numbers of users is much easier if you add them as members of LDAP groups or GroupWise groups. For usage instructions, see "Adding Users through an LDAP Group or a GroupWise Group" on page 56.

To add a user to your Mobility system:

1 In the Mobility Admin console, click **Users**.

2 Click **Add User**.

3 Select the user source (**LDAP** or **GroupWise**).

4 In the **Search** field, type the first or last name of a specific user, then click **Search**.

   or

   Click **Search** to list the users in the user source that the Mobility Admin console has been configured to search.

5 Select one or more users to add to your Mobility system.

6 (Conditional) If you are using LDAP as the user source and if the user's GroupWise user name is not the same as the user's LDAP user name:

   6a In the **Default Name** column, click the user name.

   6b Enter the user's GroupWise user name in the text box.

   The Mobility Service uses default user names to match users who have different user names in GroupWise and in the LDAP directory.

7 Click **Add** to add the users to your Mobility system.

Adding Users through an LDAP Group or a GroupWise Group

As the preferred alternative to adding individual users in the Mobility Admin console, you can add users to any LDAP groups or GroupWise groups. You can use iManager to manage LDAP groups or the GroupWise Admin console to manage GroupWise LDAP groups. You can use the GroupWise Admin console (or ConsoleOne in older GroupWise systems) to manage GroupWise groups (distribution lists in older GroupWise systems).

Users who are added to groups are added to the Mobility system based on the Group Membership Polling Rate setting. For setup instructions, see "Adjusting the Mobility Admin Console Polling Rate for Groups of Users" on page 11.

You can also poll groups immediately. For instructions, see "Updating a Group of Users in Your Mobility System" on page 59.

For more information, see "Managing Groups of Users" on page 58.

Customizing a User's Synchronization Settings

The GroupWise Mobility Quick Start for Mobile Device Users describes the synchronization settings that are available to users on the Mobility Settings page of the Mobility Admin console. You can also control users' synchronization settings as an administrator. The settings most recently saved by either you or the user become the user's current settings.

To change a user's synchronization settings:

1. In the Mobility Admin console, click **Users**.
2. (Conditional) To set GroupWise settings for users, click **Edit GroupWise Settings**.
3. (Conditional) To set device settings, click **Edit Device Settings**.
4. Select and deselect options as needed to customize the user's data synchronization.
5. Click **Save**, then click **Close Window**.

The user's synchronization settings are immediately changed.

Setting GroupWise User Names for LDAP Users (Optional)

During installation of the Mobility Service, you selected the source (LDAP or GroupWise) from which users and groups of users can be added to your Mobility system. For background information, see "Selecting the User Source for Your Mobility System" in the *GroupWise Mobility Service 18 Installation Guide*.

If you selected LDAP as your user source and if LDAP (network) user names are not the same as GroupWise user names, the Mobility Admin console attempts to determine the GroupWise user names from the user information available in the LDAP directory.

When you add individual LDAP users, you can verify the GroupWise user name as you add each user. For instructions, see Step 6 in "Adding Individual Users" on page 55. If you used this approach to adding users, you do not need to verify and adjust GroupWise user names as a separate step, as described below.

When you add users to your Mobility system by adding them to LDAP groups, you can specify the GroupWise user names if a problem arises during initial synchronization. If the Device Sync Agent cannot successfully match an LDAP user name with a GroupWise user name, initial synchronization fails.

To specify a user's GroupWise user name, because it is different from the user's LDAP user name:

1. In the Mobility Admin console, click **Users**, then click the name of the user.
2. Click **Edit Device Settings**
3. In the **Mobility User Name** field, specify the GroupWise user name that is different from the LDAP user name.
4. Click **Save**, then click **Close Window**.

Deleting a User

The method that you use to delete a user from your Mobility system depends on how you added the user:

- "Deleting a User Directly" on page 58
- "Deleting a User from a Group of Users" on page 58

Deleting a User Directly

If you added an individual user, you delete the user in the Mobility Admin console.

1. In the Mobility Admin console, click **Users**.
2. Click **Delete** to the right of the user, then click **Delete User** to confirm.

   The user's status changes briefly to **Deleting**, then the user disappears from the list.

Deleting a User from a Group of Users

If you added the user to your Mobility system by adding the user to an LDAP group or a GroupWise group, you must delete the user from the group in order to delete the user from your Mobility system. You can use iManager to manage LDAP groups or the GroupWise Admin console to manage GroupWise LDAP groups. You can use the GroupWise Admin console (or ConsoleOne in older GroupWise systems) to manage GroupWise groups (distribution lists in older GroupWise systems).

In your Mobility system, the user is removed from the group according to the group polling rate. For background information, see "Adjusting the Mobility Admin Console Polling Rate for Groups of Users" on page 11.

You can also poll immediately. For instructions, see "Adding Users through an LDAP Group or a GroupWise Group" on page 56.

Managing Groups of Users

During installation of the Mobility Service, you selected the source (LDAP or GroupWise) from which users and groups of users can be added to your Mobility system. For background information, see "Selecting the User Source for Your Mobility System" in the *GroupWise Mobility Service 18 Installation Guide*.

You can use iManager to manage LDAP groups or the GroupWise Admin console to manage GroupWise LDAP groups. You can use the GroupWise Admin console (or ConsoleOne in older GroupWise systems) to manage GroupWise groups (distribution lists in older GroupWise systems).

If you selected LDAP as your user source, you specified one LDAP group container in your LDAP directory. By default, the Mobility Admin console searches that LDAP container and its subcontainers for groups to add to your Mobility system. After installation, you can configure the Mobility Admin console to search additional LDAP containers for groups to add. For setup instructions, see "Searching Multiple LDAP Contexts for Users and Groups" on page 13.

If you selected GroupWise as your user source during installation, all GroupWise groups in the GroupWise Address Book are available to add to your Mobility system.

- "Adding a Group of Users to Your Mobility System" on page 58
- "Updating a Group of Users in Your Mobility System" on page 59
- "Deleting a Group of Users from Your Mobility System" on page 59

Adding a Group of Users to Your Mobility System

1. In the Mobility Admin console, click **Users**, then click **Groups**.
2. Click **Add Groups**.
3. Select the user source (**LDAP** or **GroupWise**).

4 Click **Search** to list the groups of users that are available in the user source.

   or

   In the **Search** field, type part of the group name, then click **Search**.

5 Select the group of users to add to your Mobility system.

6 Click **Add** to add the group.

   The group is immediately added to your Mobility system, and the users in the group are immediately listed on the Users page.

Updating a Group of Users in Your Mobility System

During installation of the Mobility Service, you selected the source (LDAP or GroupWise) from which users and groups of users can be added to your Mobility system. For background information, see "Selecting the User Source for Your Mobility System" in the *GroupWise Mobility Service 18 Installation Guide*.

By default, the Mobility Admin console polls the user source for group membership changes every 30 minutes. For background information, see "Adjusting the Mobility Admin Console Polling Rate for Groups of Users" on page 11. However, you can poll the user source immediately to get the latest updates.

1 In the Mobility Admin console, click **Config**> **User Source**.

2 In the **Group Membership** field, click **Poll Now**.

Deleting a Group of Users from Your Mobility System

Deleting a group of users deletes the users in that group from your Mobility system.

1 In the Mobility Admin console, click **Users**, then click **Groups**.

2 Click **Delete** for the group to delete, then click **Yes** to confirm the deletion.

Managing Synchronized Resources

You can add GroupWise resources to your Mobility system as if they are users. If you are using LDAP as your user source, the Resource objects must be located in the same LDAP container with users or groups in order to add them to your Mobility system. If you are using GroupWise as your user source, all resources are automatically available to add to your Mobility system. GroupWise resources require Mobility authentication to be set to GroupWise or the resources cannot authenticate.

Whenever you create a new resource that you want to synchronize to mobile devices, you must proxy in to the resource mailbox and set its mailbox password before it is available for synchronization. Accessing the mailbox creates the Frequent Contacts address book and establishes the default personal address book for the mailbox. These address books must exist in order for the GroupWise Sync Agent to successfully process address book information for the mailbox.

GroupWise users with rights to a synchronized resource mailbox can then configure their mobile devices with an account for the resource mailbox just as they create an account for their own mailbox. This enables GroupWise users who are resource owners to monitor the contents of resource mailboxes from their mobile devices.

To add and manage resources in your Mobility system, follow the instructions in "Managing Mobile Device Users" on page 55.

Managing Changes in the GroupWise System

The following changes in the GroupWise system affect the functionality of your Mobility system:

- "When New Users Are Added to the GroupWise System" on page 60
- "When a Mailbox Moves" on page 60
- "When a GroupWise Account Is No Longer Available" on page 60

When New Users Are Added to the GroupWise System

When you add new users to GroupWise, they are not immediately available in the Mobility Admin console for adding to your Mobility system. They automatically become available within 30 minutes of when the Mobility Global Address List (GAL) is updated from the GroupWise Address Book.

You can use the **Poll Now** option in the Mobility Admin console to update the Mobility GAL immediately. For instructions, see "Updating a Group of Users in Your Mobility System" on page 59.

Whenever you create a new GroupWise user, the user must log in to the GroupWise client or WebAccess to prepare the mailbox for synchronization. Accessing the mailbox creates the Frequent Contacts address book and establishes the default personal address book for the mailbox. These address books must exist in order for the GroupWise Sync Agent to successfully process address book information for the mailbox.

When a Mailbox Moves

When the GroupWise administrator moves a mailbox from one post office to another, the following changes occur in your Mobility system:

- In the Mobility Admin console, the Dashboard displays the user as **Moved**.
- The moved user is automatically reinitialized to associate it with the new post office and POA.

NOTE: If you are running GroupWise 8, you must manually reinitialize the user. For instructions, see "Reinitializing a User" on page 65.

When a GroupWise Account Is No Longer Available

When the GroupWise administrator disables, expires, or deletes a GroupWise account, the following changes occur in your Mobility system:

- In the Mobility Admin console, the Dashboard displays the user as **Disabled**, **Expired**, or **Deleted**.
- The GroupWise Sync Agent stops contacting the POA for items to synchronize to the user's mobile device.
- The Device Sync Agent drops any items from the user's mobile device that would otherwise synchronize to GroupWise.
- If the GroupWise administrator re-establishes the account, the user must re-add the account to the device.

7 GroupWise Mobility Device Management

When you install the GroupWise Mobility Service, the sync agents start automatically. You can monitor the synchronization of data to and from mobile devices in the Mobility Admin console.

- "Managing Mobile Devices" on page 61
- "Resynchronizing a Device" on page 62
- "Blocking/Unblocking Specific Devices" on page 63
- "Releasing a New Device from the Quarantine" on page 64
- "Resetting a Device to Factory Default Settings" on page 64
- "Deleting a Device" on page 65
- "Reinitializing a User" on page 65

Managing Mobile Devices

After users have configured their mobile devices and connected to the Mobility system, additional options are available on the User/Device Actions page in the Mobility Admin console.

1. In the Mobility Admin console, click **Users**.
2. Click the user name of the device owner to display the User/Device Actions page.
3. Use the options in the **Device Actions** column to manage devices where synchronization is active:

Device Action	Description
Resync Device	Resynchronizes the mobile device with the Mobility system. Use this option to resolve the following problems: • Synchronization from the Mobility system to a mobile device might occasionally stop, perhaps because abnormal cellular network conditions resulted in dropped synchronization data. • Data on a mobile device might not match data as displayed in the GroupWise mailbox. A user can accomplish the same thing by removing the account from the mobile device and re-adding it, so that the GroupWise data resynchronizes from the Mobility system to the mobile device. If resynchronizing the device does not resolve discrepancies between data on the device and data in GroupWise, you must reinitialize the user. During reinitialization, the user's GroupWise data is deleted from the Mobility system and is requested again from the GroupWise system. If the user has a large amount of GroupWise data and attachments, the reinitialization process might take a long time.
Block Device	Prevents the mobile device from connecting to the Mobility system. Use this option when a mobile device is temporarily disrupting your Mobility system by using excessive system resources.

Device Action	Description
Unblock Device	Enables a blocked mobile device to connect again to your Mobility system.
Allow Device	Allows a quarantined device to connect for the first time to your Mobility system.
Reset Device	Resets the mobile device to factory default settings. Use this option when a user has lost a mobile device. On some mobile devices, this functionality is known as a "remote wipe" or a "kill pill." Regardless of the device-specific functionality, this is a very serious step to take with a mobile device. The Device Sync Agent sends the Reset command to the mobile device, but different devices respond to the Reset command in different ways. Some devices do not respond to a Reset command unless a security policy has been set on the device. The Reset Device button does not display for a device if it will not respond to a Reset command.
Delete Device	Deletes the mobile device from your Mobility system. Use this option when a user is no longer using a particular mobile device.

For more information about device states and actions, see:

- "Resynchronizing a Device" on page 62
- "Blocking/Unblocking Specific Devices" on page 63
- "Releasing a New Device from the Quarantine" on page 64
- "Resetting a Device to Factory Default Settings" on page 64

  See also "Enabling a Device Password Security Policy" on page 40
- "Deleting a Device" on page 65
- "Reinitializing a User" on page 65

Resynchronizing a Device

Occasionally, synchronization problems arise between mobile devices and GroupWise:

- Synchronization from the Mobility system to a mobile device might occasionally stop, perhaps because abnormal cellular network conditions resulted in dropped synchronization data.
- Data on a mobile device might not match data as displayed in the GroupWise mailbox.

Resynchronizing the device can resolve these problems. Resynchronization causes existing GroupWise data on the device to be deleted, and then synchronized again from the Mobility system. The user can accomplish the same thing by removing the account from the mobile device and adding it again.

1 In the Mobility Admin console, click **Users**.

2 Click the user name of the device owner to display the User/Device Actions page.

3 In the **Actions** column in the **Devices** section, click **Resync Device**.

   You are prompted to confirm the action.

4 Click **OK** to acknowledge completion of the action.

   The device is resynchronized the next time it tries to connect to the Mobility system.

5 (Conditional) If resynchronizing the device does not resolve data discrepancies between the device and GroupWise, you must reinitialize the user.

For instructions, see "Reinitializing a User" on page 65.

Blocking/Unblocking Specific Devices

As you monitor your Mobility system, you might notice that a device starts to consume an inappropriately large amount of system resources on your Mobility server. This can impact synchronization performance for all mobile device users. If this occurs, you can prevent the problem device from connecting to the Mobility system while you resolve the issue.

1 In the Mobility Admin console, click **Users**
2 Click the user name of the device owner to display the User/Device Actions page.
3 In the **Actions** column in the **Devices** section, click **Block Device**.

   If you click **Block User** in the **User** column, it blocks all devices for the user. This is convenient when the user has multiple mobile devices, or when the user's mobile device has multiple device IDs.

   You are prompted to confirm the action.
4 Click **Block Device** so that so that the device can no longer connect to your Mobility system.
5 Click **OK** to acknowledge completion of the action.

   At this point, **Normal** changes to **Blocked** for the device ID, and **Block Device** changes to **Unblock Device**.
6 Resolve the problem with the mobile device.
7 To unblock the device so that it can connect to your Mobility system again, click **Unblock Device**.

   You are prompted to confirm the action.
8 Click **Unblock Device** to allow the device to connect.
9 Click **OK** to acknowledge completion of the action.

   The user can again connect to the Mobility system.

Releasing a New Device from the Quarantine

After you enable the device quarantine, new mobile devices cannot connect to your Mobility system until you release them from the quarantine. For background information, see "Quarantining New Devices to Prevent Immediate Connection" on page 41. You can configure the Mobility Service to notify you when users connect new devices. For instructions, see "Enabling System and Service Notifications" on page 47.

IMPORTANT: After you enable the quarantine, you must manually release quarantined devices in a timely manner.

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1. In the Mobility Admin console, click **Users**.
2. Click the user name of the device owner to display the User/Device Actions page.

   The user's state displays as **Synced** because data has synchronized from the user's GroupWise mailbox to the Device Sync Agent, but the data has not yet synchronized to the user's mobile device.
3. In the **Actions** column in the **Devices** section, click **Allow Device** to free the device from the quarantine, and thereby allow the new device to connect to your Mobility system and receive the GroupWise mailbox data.

   You are prompted to confirm the action.
4. Click **Allow Device**.
5. Click **OK** to acknowledge completion of the action.

   GroupWise data begins synchronizing to the user's device.

Resetting a Device to Factory Default Settings

If a user loses a mobile device, it is important to wipe all data from the lost device as quickly as possible. If the device is recovered, it can be reset and used again.

WARNING: Because this action removes all data from the device, both business and personal, this is a very serious step to take with a mobile device

---

1. In the Mobility Admin console, click **Users**.
2. Click the user name of the device owner to display the User/Device Actions page.
3. In the **Actions** column in the **Devices** section, click **Reset Device**.

   NOTE: Some devices do not respond to a Reset command unless a security policy has been set on the device. The Reset Device button does not display for a device if it will not respond to a Reset command. For more information, see "Enabling a Device Password Security Policy" on page 40.

   You are prompted to confirm the action.
4. Click **Reset Device** to wipe the user's personal data from the device and reset the device to factory default settings.
5. Click **OK** to acknowledge completion of the action.

At this point, the device ID turns yellow and is marked with the **Resetting** status. Regardless of how many times the mobile device tries to connect, it always receives the Reset command. However, **Reset Device** changes to **Reset Device Clear**, indicating that the **Resetting** status can be cleared.

6 (Conditional) If you want to put the device back into service:

   6a In the **Actions** column in the **Devices** section, click **Reset Device Clear**.

   You are prompted to confirm the action.

   6b Click **Allow Device**.

   6c Click **OK** to acknowledge completion of the action.

   The user must now start over and reconfigure the device to connect to the Mobility system and start synchronizing data.

Deleting a Device

When a user is no longer using a device, you should promptly delete it from your Mobility system. Deleting the device does not delete the user from your Mobility system. If necessary, the user can again configure the device to connect to the Mobility system.

NOTE: By default, mobile devices that have not connected to your Mobility system for 30 days are automatically removed from your Mobility system. For more information about automatic deletion, see "Removing Unused Devices Automatically" on page 42.

To immediately remove a device from your Mobility system:

1. In the Mobility Admin console, click **Users**
2. Click the user name of the device owner to display the User/Device Actions page.
3. In the **Actions** column in the **Devices** section, click **Delete**.

   You are prompted to confirm the action.
4. Click **Delete Device** to remove the device from the Mobility system.
5. Click **OK** to acknowledge completion of the action.

Reinitializing a User

If resynchronizing a device does not resolve discrepancies between data on a mobile device and data as displayed in GroupWise, you must reinitialize the user. For background information about resynchronizing, see "Resynchronizing a Device" on page 62,

During reinitialization, the user's GroupWise data is deleted from the Mobility system and is requested again from the GroupWise system. If the user has a large amount of GroupWise data and attachments, the reinitialization process might take a long time.

1. Have the user delete the GroupWise account from his or her mobile device.
2. In the Mobility Admin console, click **Users**.
3. Click the user name of the device owner to display the User/Device Actions page.
4. In the **Actions** column in the **User** section, click **Reinitialize User**.

   You are prompted to confirm the action.

5. Click **Reinitialize User** to remove the user's GroupWise data from the Mobility system and request it again from the GroupWise system.
6. Click **OK** to acknowledge completion of the action.
7. Have the user re-add the GroupWise account to the mobile device to complete the reinitialization process.
8. (Conditional) If reinitializing the user still does not resolve discrepancies between data on the device and data as displayed in GroupWise, delete the user from the Mobility system, and then re-add the user.

   See "Managing Mobile Device Users" on page 55.

8 GroupWise Mobility for Microsoft Outlook

GroupWise Mobility Service 18 allows the Microsoft Outlook 2013 and 2016 clients for Windows and the Microsoft Outlook app to run against a GroupWise backend via Microsoft ActiveSync 14.0 protocol.

- "Configuring GroupWise Mobility Service to Support Microsoft Outlook Clients" on page 67
- "Setting Up Microsoft Outlook Clients" on page 68
- "Known Limitations" on page 73

Configuring GroupWise Mobility Service to Support Microsoft Outlook Clients

Complete the tasks in the following sections to enable your GroupWise Mobility system to support Microsoft Outlook clients.

- "Microsoft Outlook Support in GroupWise Mobility Service" on page 67
- "Provisioning Users in GroupWise Mobility Service" on page 67

Microsoft Outlook Support in GroupWise Mobility Service

By default, Outlook client support is enabled for GroupWise Mobility Service. You can select which types of Outlook devices to connect to GMS: the Outlook client, the Outlook Mobile app, or both. Outlook client is selected by default.

If possible, each Mobility server that you enable should be using a trusted certificate rather than a self-signed certificate. On Mobility servers that use self-signed certificates, Outlook client users can receive frequent warning messages and Outlook app users will not be able to connect at all. For more information, see "Self-Signed Certificates" (page 77).

To change the Outlook client support:

1. In the Mobility console, go to **Config** > **Device**.
2. Make sure **Allow Connections** is enabled.
3. Enable or disable **Outlook Client** or **Outlook Mobile App** to allow or disallow Outlook devices to connect to GMS.
4. Click **Save**.

Provisioning Users in GroupWise Mobility Service

GroupWise users who will use the Outlook client must be added to the GroupWise Mobility system. For information about adding users to your GroupWise Mobility system, see "Managing Mobile Device Users (page 55)".

Setting Up Microsoft Outlook Clients

Complete the tasks in the following sections to set up Outlook clients to access GroupWise:

- "Supported Microsoft Outlook Clients" on page 68
- "Adding a GroupWise Account to the Microsoft Outlook Client" on page 68
- "(Optional) Configuring GroupWise Address Lookup in the Microsoft Outlook Client" on page 72
- "(Optional) Configuring GroupWise Free/Busy Search in the Microsoft Outlook Client" on page 73

Supported Microsoft Outlook Clients

- Microsoft Outlook 2013 for Windows
- Microsoft Outlook 2016 for Windows
- Microsoft Outlook App

Adding a GroupWise Account to the Microsoft Outlook Client

The Outlook client must be configured to access a user's GroupWise account. The following instructions assume that the Outlook client is already installed on the desired machine. There are two ways to add a GroupWise account to the Microsoft Outlook Client: manually or using the GroupWise profile setup tool.

- "Using the GroupWise Profile Setup Utility" on page 68
- "Creating the GroupWise Account Manually" on page 69

Using the GroupWise Profile Setup Utility

Before using the GroupWise Profile Setup utility, you can configure it so less information needs to be entered by the end users. The GroupWise Profile Setup utility is found in `/opt/novell/datasync/tools/GWProfileSetup.zip`.

- "Configuring the GroupWise Profile Setup Utility" on page 68
- "Using the GroupWise Profile Setup Utility" on page 69

Configuring the GroupWise Profile Setup Utility

Configuring the GroupWise Profile Setup utility allows you as an administrator to customize the utility and fill out global information for your users. You can also use it to import certificates for Free/Busy, GMS, and an LDAP address book if you do not use commercial certificates or your CA certificate is

not found in the Windows Certificate Authority Store. You can follow the steps found in Gathering CA Certificates in the *GroupWise Mobility Service 18 Security Enhancements Quick Start* if you need help gathering the certificates.

If you do not want to customize the utility, skip to Using the GroupWise Profile Setup Utility.

1. Download the `GWProfileSetup.zip` from the GMS server and extract the files to a temporary location on your workstation.
2. Edit `GWProfileSetup.ini` using the information in the file to modify the variables.
3. Zip up the `64bithelper.exe`, `GWProfileSetup.exe`, `GWProfilSetup.ini`, and any CA certificates needed and deliver the zip file to your users so they can create the GroupWise Profile for Outlook on their Windows machines following the steps in Using the GroupWise Profile Setup Utility.

Using the GroupWise Profile Setup Utility

The steps below allow your users to create the GroupWise Profile for Outlook on their Windows workstation. The same steps must be followed whether or not you configured the utility.

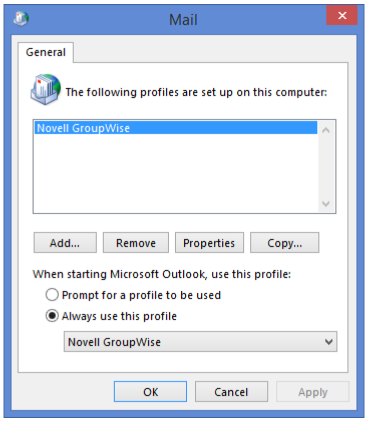
1. Extract the `GWProfileSetup.zip` to a temporary location on your workstation.
2. Launch the `GWProfileSetup.exe`.
3. (Conditional) Accept any certificates that needed to be added to your machine.
4. Enter in the information required to create the GroupWise Profile for Outlook.

Creating the GroupWise Account Manually

1. On the machine, open **Control Panel** > **User Accounts and Family Safety**.

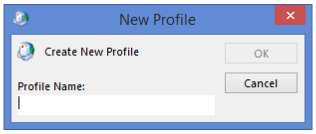
2. Click **Mail**.

3 (Conditional) If a Mail Setup dialog box is displayed, click **Show Profiles** to display the Mail dialog box.

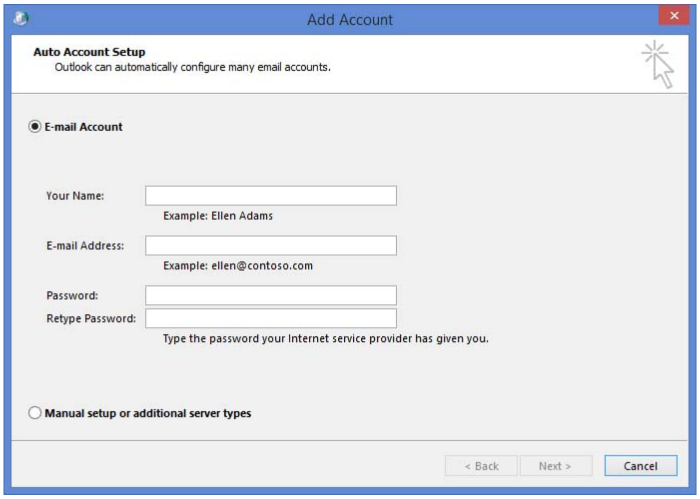


If GroupWise is installed on the machine, the Profiles list includes a **GroupWise** profile, as shown in the screenshot above. You need to keep this profile and create a new profile.

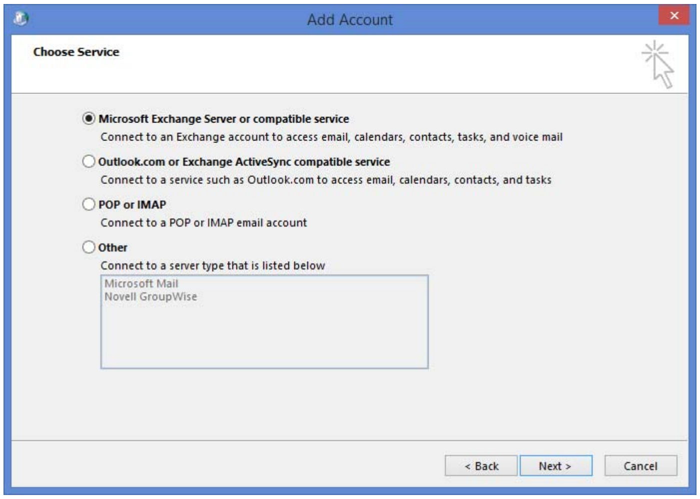
4 Click **Add** to create a new profile.



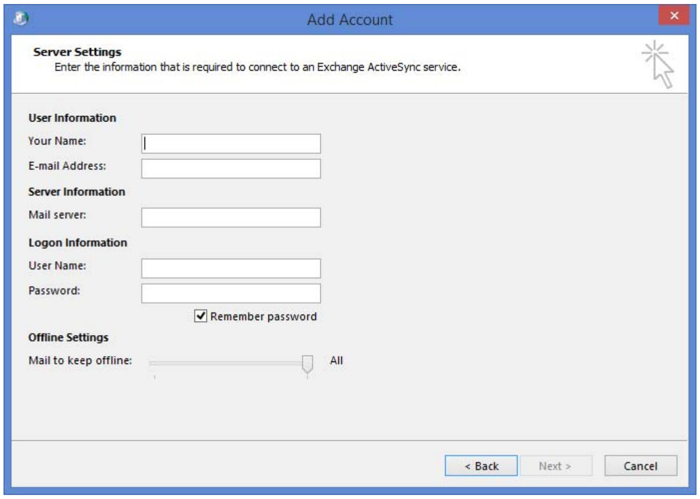
5 Specify a name for the profile (for example, *Outlook GroupWise Account*), then click **OK** to display the Add Account dialog box.



6 Select **Manual setup or additional server types**, then click **Next**.



7 Select **Outlook.com or Exchange ActiveSync compatible service**, then click **Next**.



8 Provide the following information, then click **Next**.

Your Name: The GroupWise user's full name (for example, Sarah McBride).

E-mail Address: The user's GroupWise address (for example, smcbride@acme.com).

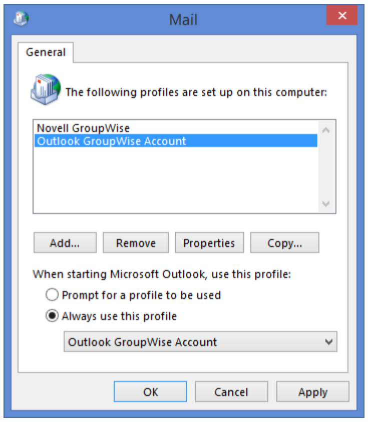
Mail Server: The GroupWise Mobility Server name or IP address (for example, gms.acme.com).

User Name: The user's LDAP user name or GroupWise user name, depending on whether LDAP or GroupWise is being used for the authentication source.

Password: The password associated with the user name.

9 When the account settings have been verified, click **Close** to dismiss the verification dialog box.

10 Click **Finish** to return to the **Mail** profiles dialog box.



11 Select one of the following options, then click **OK** to save your changes.

- **Prompt for a profile to be used:** Select this option if the Outlook client will be used to access multiple email accounts and the user wants to be prompted to select an account when starting the client.
- **Always use this profile:** Select this option if the user wants to always open the GroupWise account when starting the client, then select the Outlook GroupWise account in the list.

12 Launch the Outlook client.

The client begins synchronizing data from the GroupWise account.

(Optional) Configuring GroupWise Address Lookup in the Microsoft Outlook Client

There are two ways that you can configure address lookups in Outlook: the GroupWise System Address Book or LDAP.

- "Using the GroupWise System Address Book" on page 72
- "Using LDAP" on page 73

Using the GroupWise System Address Book

1 Create an Admin App in GroupWise.

2 In Outlook, create a new Address Book using the following information:

- Select **Internet Directory Service (LDAP)** for the address book type
- For the **Server Name**, specify the DNS name or IP address of your GroupWise server.
- For **Logon Information**, the user name is the Admin App name in the following format:

  `cn=`*`admin_app_name`*

  The password is the password of the Admin App.
- In **More Settings** > **Search**, specify the custom base as `o=`*`GroupWise_system_name`*, replacing *GroupWise_system_name* with the name of your GroupWise system.

3 After saving, exit and restart Outlook for the address book to be available.

Using LDAP

1. From the main Microsoft Outlook window, click **File** > **Account Settings**.
2. Click the **Address Books** tab, then click **New**.
3. Select **Internet Directory Service (LDAP)**, then click **Next**.
4. Enter the server name (for example, `ldap.myidomain.com`).
5. Enter additional settings as required by your configuration (port, SSL, credentials).
6. Save the LDAP information.
7. Exit and restart Outlook.

   The LDAP address book will be available for name search/selection from the Address Book list in Outlook.

(Optional) Configuring GroupWise Free/Busy Search in the Microsoft Outlook Client

Microsoft Outlook has not implemented the ActiveSync 14.*x* ability to look up contact availability (Free/Busy information).

However, GroupWise provides a Calendar Publishing Host that you can use to make Free/Busy information available in the Outlook client. For information, see "Setting Up the GroupWise Calendar Publishing Host" in the *GroupWise 18 Installation Guide*.

To configure the Outlook client to use Free/Busy information made available by the GroupWise Calendar Publishing Host:

1. From the main Microsoft Outlook window, click **File** > **Options**.
2. In the left panel, click **Calendar**.
3. In the **Calendar Options** section, click the **Free/Busy Options** button.
4. Select the **Publish at Location** box, change the value in the box to 36 months or less, then uncheck the **Publish at Location** box.
5. In the **Search Location** field, enter the Free/Busy URL for your published Internet Free Busy path, replacing your user name with `%NAME%` and your domain with `%SERVER%`. For example:

   `http://groupwise.acme.com/gwcal/freebusy/%NAME%@%SERVER%`

   You can find your IFB in the GroupWise client, under **Tools** > **Options** > **Calendar** > **Busy Search**.
6. Click **OK** to save the changes.

   When you go to Scheduling in the Outlook client and add a GroupWise user to the Attendees list, the user's Free/Busy information is displayed.

Known Limitations

Your experience running the Microsoft Outlook client against a GroupWise backend should be roughly equivalent to running Outlook against an Outlook.com or Hotmail account. Known limitations are caused by several factors, including Outlook, the ActiveSync protocol, GroupWise Mobility Service, and general differences between GroupWise and Outlook features.

Supported Clients

- Microsoft Outlook 2013 and 2016 clients for Windows are the only supported Outlook clients.
- The Mail metro app included with Windows 8 and newer versions includes ActiveSync. Micro Focus has not tested or documented support for this configuration.
- The Outlook app for iOS and Android includes ActiveSync. Micro Focus has not tested or documented support for this configuration. To explicitly enable or disable Outlook app access to your Mobility servers, see "Microsoft Outlook Support in GroupWise Mobility Service" on page 67.
- NitroDesk TouchDown supports ActiveSync on iOS and Android. Micro Focus has not tested or documented support for this configuration.
- SyncEvolution claims support for ActiveSync. Micro Focus has not tested or documented support for this configuration.
- The following configurations will not work:
  - Hotmail Connector for Microsoft Outlook 2010
  - Microsoft Outlook 2011 for Mac
  - Microsoft Outlook 2013 for Mac
  - Native Mac OS Mail, Contact and Calendar applications
  - Ximian Evolution

Performance/Scalability

- We expect user response times to be good for operations such as accessing item lists, performing queries, and reading attachments because GroupWise data synchronizes to a local Outlook cache (OST) file.
- If any scale issues exist, they will most likely be related to additional load on GroupWise Mobility Service and will likely result in synchronization delays with the cache.
- GroupWise Mobility Service can be configured to allow, to exclusively allow, or to prevent Outlook connections to give administrators control if Outlook impacts overall performance. See "Microsoft Outlook Support in GroupWise Mobility Service" on page 67.

Initial Synchronization

- The initial synchronization of data is limited by the GroupWise Mobility Service configuration set by the administrator. For instance, if you choose to keep all data offline but GroupWise Mobility Service is configured to allow 60 days worth of data, the initial sync will only synchronize the most recent 60 days of data.

Address Book/Contacts

- Personal groups do not synchronize to Outlook.
- Outlook does provide search capabilities against LDAP. To configure LDAP address lookups, see "(Optional) Configuring GroupWise Address Lookup in the Microsoft Outlook Client" on page 72.
- When using LDAP address lookups, ensure that the display name is populated for users. If it is not, quick lookups do not work and advanced search must be used.

- If an LDAP Address Book is not added to the Mobility Outlook email client, the Address Book drop down selection is empty. In this case, Outlook creates name completion for personal contacts and recipients from sent items.
- Outlook supports contacts but does not support Personal Address Books (PAB). GroupWise Mobility Service improves this experience by aggregating contacts from all sync-configured PABs when syncing to Outlook.
- Contacts created in Outlook are created in the default PAB as specified in the **GroupWise** settings section of the GroupWise Mobility configuration for each user.

Compose

- Outlook does not create server-side drafts. They are stored locally and are not available even from other workstations running Outlook.
- Name completion data is not synchronized to GroupWise or between clients using GroupWise Mobility Service.

Tasks

- ActiveSync 14.*x* does not support Outlook/GroupWise `%Complete`.
- ActiveSync 14.*x* does not support GroupWise Priority. It does map the priority settings on the Send Options tab to Outlook's `High`/`Standard`/`Low` priorities.
- On an Outlook task, the details view has many fields that do not sync to GroupWise. They are:
  1. `Date Completed`
  2. `Total/Actual Work`
  3. `Milage`
  4. `Billing Information`
  5. `Company`
- On a GroupWise task, only `High`, `Standard`, and `Low` priority settings sync to Outlook. All other settings are GroupWise only settings.
- ActiveSync does not support recipients on tasks. Tasks are personal items when synced to Outlook.
- GroupWise distributed tasks sync the `Subject`, `Start Date`, `Due Date`, `Message Body`, `Priority (High, Standard, Low)`, `Complete`, `Alarm`, and `Recurrences` as a personal task in Outlook. If you modify the distributed task in Outlook, only a `Subject` change is applied by GroupWise and when GroupWise syncs with Outlook again, any other changes in Outlook are overwritten by the GroupWise settings.
- Distributed tasks created in Outlook sync as a distributed in GroupWise 18 or higher only. Outlook tasks with embedded items or attachments do not sync to GroupWise.

Availability and Meeting Requests

- Outlook has not implemented the Exchange ActiveSync 14.*x* ability to look up contact availability (Free/Busy information). Users must configure Outlook to use a global Internet Free/Busy path to check attendee Free/Busy status.

An administrator must also configure and enable the GroupWise Calendar Publishing Server for users to publish Internet Free/Busy information. The administrator can choose to publish all Free/Busy information, or the administrator can enable publishing but leave the decision to publish Free/Busy information to individual users.

For instructions, see "(Optional) Configuring GroupWise Free/Busy Search in the Microsoft Outlook Client" on page 73.

- The entered email address must match exactly the email address for which the .ifb is published on GroupWise CalPub. For instance, if the name is published as *user@novell.com*, then only this email address will return Free/Busy information to Outlook even though the user might also be addressable via other iDomains or address formats (for example, *user@gw.novell.com*, *user@attachmate.com*, and *first.last@novell.com*).
- Outlook does not allow configuration of multiple global internet Free/Busy search paths, so Outlook users on a mixed system can only configure availability searches against GroupWise users or against Exchange users.
- Outlook Internet Free/Busy (IFB) lookups will not work with self-signed certificates. The IFB server must be configured for HTTP or the certificate chain must include a trusted root CA. With a self-signed certificate, Outlook does not prompt the user as is the case in normal browsers, and allows him or her to continue even though the IFB server isn't trusted. As a result, Outlook eventually presents a generic error message stating that there is a problem with the Free/Busy URL.
- Outlook does not auto-add the organizer as an attendee for meeting requests. The organizer needs to manually add himself in order to show on the GroupWise calendar and to block out Free/Busy time in GroupWise.
- No support for online meeting requests.
- No support for Lunar calendar.
- If you have Outlook users who are running against an Exchange back end, you can use the GroupWise Free/Busy Service to allow GroupWise and Outlook users to perform Free/Busy searches on each others' calendars. For more information, see "GroupWise Free/Busy Service" in the *GroupWise/Exchange Coexistence Guide*.

Folders

- Online email search is not available in Outlook or GroupWise Mobility Service.
- Outlook does not have a Notes folder/application. Notes created in GroupWise or on devices such as the iPhone will not be available within Outlook.
- No ActiveSync support for shared folders, calendars, or address books.
- Folder permissions are grayed out in Outlook.
- No support for **Always Move Messages in a Conversation or From a Particular Sender**.
- Outlook does not allow posting of an item to a folder (**New Items** > **More Items** > **Post in this Folder**).
- Outlook does not allow moving an item from another store (for example, PST, Hotmail, or IMAP) to ActiveSync folders.
- Outlook does not allow using ActiveSync folders for POP3 mailboxes.
- Outlook search folders are not synchronized.

Rules

- In Outlook, you cannot create rules that will execute on the server (for example, vacation, auto-reply, auto-forward). Client-side rules are available, but the Outlook client must be running in order for the rule to execute.
- Creating rules in an Outlook/GroupWise configuration is more difficult than creating those same rules in an Outlook/Exchange configuration. For example, creating a client-side vacation rule requires the user to browse to and select a previously saved message template rather than giving the user the ability to edit the rule directly during rule creation. For more information, see http://www.ablebits.com/office-addins-blog/2014/02/20/create-email-templates-outlook/.
- Junk mail handling does not synchronize.

External System Integration

- Outlook does not provide a way to import external data into a store.
- No support for SharePoint file links proxied through ActiveSync.

GroupWise Features Not Available in Microsoft Outlook

- **Proxy:** Outlook cannot proxy GroupWise user mailboxes.
- **Sent Item Properties:** Outlook does not provide properties for sent items.
- **Calendar Publishing Host:** Outlook cannot publish user availability through the Calendar Publishing Host for others to consume.
- **Reminder Notes/Personal Reminder Notes:** Outlook displays GroupWise reminder notes and personal reminder notes as all-day events.
- **Phone Messages:** Outlook displays GroupWise Phone messages as email.
- **Editors:** Outlook does not support OpenOffice/LibreOffice as an editor.
- **Send Options:** Outlook does not support GroupWise Send options such as concealed subject, recipient notification, and reply requested. Delayed message delivery, expiration, and redirected replies do not work.
- **Security Classifications:** Outlook maps the GroupWise Security classifications (proprietary, secret, top secret, and for your eyes only) to the Outlook sensitivities of personal, private, or confidential.
- **Resources:** Outlook cannot manage GroupWise resources.
- **Meeting Requests:** Outlook filters out meeting requests from mail folders, including the Sent Items folder. These are only accessible through the calendar.

Miscellaneous

- **Categories:** Categories do not sync between Outlook and GroupWise. Categories will sync between Outlook and other GroupWise Mobility connected devices.
- **Message Retraction:** Message recall (retraction) is not available over Exchange ActiveSync.
- **Self-Signed Certificates:** If your server is using self-signed certificates (not signed by a trusted CA), users might experience frequent warning messages. If you have enabled your GroupWise Mobility server to support the Microsoft Outlook app (see “Microsoft Outlook Support in

GroupWise Mobility Service” on page 67), the server must be configured to use a trusted certificate. If you use the self-signed certificate that GroupWise Mobility Service generates, the Outlook app will not be able to connect.

- **Voting Buttons:** Voting buttons do not work.
- **Remote Wipe:** Outlook does not honor remote wipe requests from GroupWise Mobility Service.

9 GroupWise Mobility System Security

Large amounts of personal and confidential information pass between GroupWise and mobile devices. Securing the synchronization process is a vital aspect of securing your GroupWise system.

- "Security Administration" on page 79
- "Security Policies" on page 84
- "Certificate Verification" on page 87
- "Secure Gateway (GWAVA 7) Integration" on page 91

Security Administration

It is vital to secure each stage in the communication path between GroupWise and mobile devices.

- "Securing Communication with the LDAP Server" on page 79
- "Securing Communication between the GroupWise Sync Agent and the GroupWise POA" on page 79
- "Securing Communication between the Device Sync Agent and Mobile Devices" on page 80

Securing Communication with the LDAP Server

If you are using LDAP as your user source, you must secure the communication between your Mobility system and the LDAP server.

If your GroupWise system is configured to use LDAP authentication when users access their GroupWise mailboxes, your LDAP server is already set up for a secure SSL LDAP connection with your Mobility system. For more information, see Trusted Root Certificates and LDAP Authentication in the *GroupWise 18 Administration Guide*.

You can enable and disable SSL for the LDAP connection in the LDAP section of the User Source page in the Mobility Admin console. For instructions, see "Enabling and Disabling SSL for the Mobility Service LDAP Connection" on page 14.

Securing Communication between the GroupWise Sync Agent and the GroupWise POA

The GroupWise Sync Agent communicates with the GroupWise POA as a SOAP client. In order to secure communication between the GroupWise Sync Agent and the GroupWise POA, the POA must be configured for secure SSL SOAP. SOAP is enabled by default in GroupWise 18.

You can enable and disable SSL for the POA SOAP connections on the GroupWise Sync Agent Configuration page in the Mobility Admin console. For instructions, see "Enabling and Disabling SSL for POA SOAP Connections" on page 35.

Securing Communication between the Device Sync Agent and Mobile Devices

In order to provide a secure SSL connection between the Device Sync Agent and mobile devices, you must provide a server certificate on the Mobility server.

- "Using a Self-Signed Certificate on the Mobility Server" on page 80
- "Using a Commercially Signed Certificate on the Mobility Server" on page 80
- "Manually Converting a Certificate to DER Format for Use on Mobile Devices" on page 83
- "Manually Downloading a Certificate to a Mobile Device" on page 83
- "Enabling and Disabling SSL for Device Connections" on page 84
- "Enabling a Password Security Policy for Device Connections" on page 84

For issues with specific types of certificates, see GroupWise Mobility Device Sync Agent SSL Issues (http://wiki.novell.com/index.php/Data_Synchronizer_Mobility_Connector_SSL_Issues).

For SSL issues with specific types of devices, see GroupWise Mobility Devices (http://wiki.novell.com/index.php/Data_Synchronizer_Mobility_Connector_Devices).

Using a Self-Signed Certificate on the Mobility Server

IMPORTANT: You should obtain a commercially signed certificate for use with your Mobility system as quickly as possible.

When you have the Mobility Service Installation program create a self-signed certificate for you, two certificate files are created in the `/var/lib/datasync/device` directory:

```
mobility.pem
mobility.cer
```

When a mobile device connects to the Device Sync Agent, the Device Sync Agent passes the self-signed certificate file (`mobility.pem`) to the mobile device. In most cases, the mobile device accepts the self-signed certificate and connects successfully.

Some mobile devices do not automatically accept self-signed certificates in PEM format. If you choose to use a self-signed certificate and if users encounter connection problems with particular mobile devices, explain the procedure in "Manually Downloading a Certificate to a Mobile Device" on page 83 to the users who are encountering connection problems. This procedure enables users to use the `mobility.cer` file instead of the `mobility.pem` file on their mobile devices.

The self-signed certificate generated by the Installation program is issued to "DataSync Web Admin" rather than to a specific hostname. Some mobile devices require that a self-signed certificate be associated with a specific hostname. For more information, see Using a Self-Signed Certificate from the GroupWise Certificate Authority in the *GroupWise 18 Administration Guide*.

Using a Commercially Signed Certificate on the Mobility Server

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IMPORTANT: You should obtain a commercially signed certificate for use with your Mobility system as quickly as possible.

- "Selecting a Certificate Authority (CA)" on page 81
- "Obtaining the Certificate" on page 81

* "Removing a Password from a Key File" on page 82
* "Combining Files Received from a Certificate Authority" on page 82
* "Installing a Commercially Signed Certificate on the Mobility Server" on page 82

For more detailed instructions, see TID 7006904, "How to Configure Certificates from a Trusted CA for the Device Sync Agent" in the Novell Support Knowledgebase (http://www.novell.com/support).

Selecting a Certificate Authority (CA)

Choose a certificate authority (CA) from the many available on the Internet. If you do not want to immediately purchase a certificate, free temporary certificates are available from several websites, including:

* FreeSSL (http://www.freessl.com)
* Instant SSL (http://www.instantssl.com/ssl-certificate-products/free-ssl-certificate.html)

Obtaining the Certificate

When you have selected a certificate authority, request a certificate in PEM format. If necessary, you can use a chained certificate or a wildcard certificate with your Mobility system. However, these more complex types of certificates are not recommended.

In order to obtain a certificate, you need to send the certificate authority a certificate signing request (CSR). For example, you can use OpenSSL to generate the CSR.

1. In a terminal window on the Mobility server, become `root` by entering `su -` and the root password.
2. Change to a convenient directory where you want to create the CSR.
3. Create the key file:

   3a Enter the following command:

   ```
   openssl genrsa -des3 -out key_file_name.key 2048
   ```

   Replace *key_file_name.key* with a convenient name for the private key file, such as `gw.key`.

   3b Enter and verify a pass phrase for the key file.
4. Create the CSR:

   4a Enter the following command:

   ```
   openssl req -new -key key_file_name.key -out csr_file_name.csr
   ```

   Replace *key_file_name*`.key` with the key file that you created in Step 3.

   4b Enter the pass phrase for the key file.

   4c Enter the two-letter code for your country, such as `US` for the United States, `DE` for Germany, and so on.

   4d Enter your state or province.

   4e Enter your city.

   4f Enter the name of your company or organization.

   4g Enter your department or other organizational unit.

   4h Enter your name.

   4i Enter your email address.

4j (Optional) Enter a password for the CSR, or simply press Enter.

4k (Optional) Enter a secondary name for your company or organization, or simply press Enter.

NOTE: Depending on the method that you use to generate the CSR, you might be prompted for the type of web server where you plan to install the certificate. The Mobility Service uses the CherryPy web server.

The certificate authority returns one or more files to you. Save the files to a convenient location. These files might require modification for use in your Mobility system.

- If the certificate authority included a password, remove the password. For instructions, see “Removing a Password from a Key File” on page 82.
- If the certificate authority provided multiple files, combine them into a single file. For instructions, see “Combining Files Received from a Certificate Authority” on page 82.

Removing a Password from a Key File

If the key file provided by the certificate authority includes a password, you need to remove the password in order to use the key file in your Mobility system.

1 Check to see if the key file includes a password.

A password-protected key file includes the following line:

```
Proc-Type: 4,ENCRYPTED
```

2 Use the following command to remove the password:

```
openssl rsa -in original_file_name.key -out passwordless_file_name.key
```

Combining Files Received from a Certificate Authority

If you receive more than one file from the certificate authority, such as a certificate file and a key file, you must combine the contents into a single file with the following format:

```
-----BEGIN RSA PRIVATE KEY----- several_lines_of_private_key_text
-----END RSA PRIVATE KEY-----
-----BEGIN CERTIFICATE----- several_lines_of_server_certificate_text
-----END CERTIFICATE-----
```

If the certificate authority provided an intermediate certificate, place it at the end of the file after the private key and the actual certificate.

Installing a Commercially Signed Certificate on the Mobility Server

1 (Conditional) If you have been using a self-signed certificate, rename the existing `/var/lib/datasync/device/mobility.pem` file.

2 Copy the certificate file received from the certificate authority to `/var/lib/datasync/device`.

3 Rename it to `mobility.pem`.

4 Restart the Mobility Service.

5 (Conditional) If a particular mobile device does not automatically accept the commercially signed certificate in PEM format, follow the instructions in “Manually Converting a Certificate to DER Format for Use on Mobile Devices” on page 83.

IMPORTANT: If you uninstall the Mobility Service, the certificate files associated with your Mobility system are also deleted. Back up commercially signed certificates in a location outside of `/var/lib/datasync`.

Manually Converting a Certificate to DER Format for Use on Mobile Devices

Some mobile devices do not automatically accept certificates in PEM format. If users encounter connection problems with particular mobile devices, you can convert the PEM file that you received from the certificate authority into DER format to resolve these connection problems.

1 Change to the `/var/lib/datasync/device` directory.

2 Execute the following command:

```
openssl x509 -in mobility.pem -inform PEM -out mobility.cer -outform DER
```

IMPORTANT: The output file name with the `.cer` extension must be in DER (Distinguished Encoding Rules) format.

3 Have users with connection problems follow the instructions in "Manually Downloading a Certificate to a Mobile Device" on page 83 to use the `mobility.cer` file instead of the `mobility.pem` file.

Manually Downloading a Certificate to a Mobile Device

For background information, see "Using a Self-Signed Certificate on the Mobility Server" on page 80 and "Manually Converting a Certificate to DER Format for Use on Mobile Devices" on page 83.

1 Access the Mobility Settings page of the Mobility Admin console on your mobile device at the following URL:

`https://`*`mobility_server`*`:8120`

Replace *`mobility_server`* with the IP address or DNS hostname of the server where you installed the Mobility Service.

2 Log in using your network user name and password to display the Mobility Settings page on your mobile device.

3 Tap **Device Settings**.

4 In the **Mobility Certificate File** field, tap **Download Certificate File**.

NOTE: If you are the Mobility administrator and have associated your mobile device with the Mobility administrator account, you must navigate from the main Mobility Admin console page to the **Mobility Certificate File** field.

5 Save the `mobility.cer` file to a convenient location on your mobile device.

6 Import the certificate file into the certificate store on your mobile device.

For device-specific instructions, see the GroupWise Mobility Service Devices Wiki (http://wiki.novell.com/index.php/GroupWise_Mobility_Devices).

7 (Conditional) If you are not able to access the Mobility Settings page from your particular mobile device:

7a Access the Mobility Settings page in a web browser on your Windows or Linux desktop, then click **Device Settings**.

7b Click **Download Certificate File**.

7c Save the `mobility.cer` file on your Windows or Linux workstation.

7d Set up an IMAP email account on your mobile device, then email the `mobility.cer` file from your workstation to your mobile device.

or

Physically connect your mobile device to your workstation so that it appears as a drive on your workstation, then copy the `mobility.cer` file from your workstation to your device.

8 Import the certificate file into the certificate store on your mobile device.

Enabling and Disabling SSL for Device Connections

For instructions, see "Enabling and Disabling SSL for Device Connections" on page 43.

Enabling a Password Security Policy for Device Connections

For instructions, see "Enabling a Device Password Security Policy" on page 40.

Security Policies

Appropriate security policies help you keep users' personal GroupWise data and Mobility system information secure.

- "Certificate Considerations" on page 84
- "Securing Your Mobility Data" on page 84
- "Securing Your Mobility System" on page 85

Certificate Considerations

When creating certificates for your GroupWise system, we recommend the following:

- Consolidate to one CA for your GroupWise system.
- Use a public CA for your GroupWise system.
- Use a wildcard certificate for all of your POAs.

Securing Your Mobility Data

Your Mobility server must be kept secure.

- "Limiting Physical Access to Mobility Servers" on page 85
- "Securing File System Access" on page 85

Limiting Physical Access to Mobility Servers

Servers where Mobility data resides should be kept physically secure, in locations where unauthorized persons cannot gain access to the server consoles.

Securing File System Access

Encrypted file systems should be used on all Mobility servers. Only Mobility administrators should have direct access to Mobility data.

Securing Your Mobility System

Locations where GroupWise users' personal data and Mobility system information might be obtained must be kept secure.

- "Setting Up SSL Connections" on page 85
- "Setting Up a Device Password Security Policy" on page 85
- "Securing the Mobility Admin Console" on page 85
- "Protecting Mobility Configuration Files" on page 86
- "Protecting Mobility Log Files" on page 86

Setting Up SSL Connections

Secure SSL connections should be used between your Mobility system and the following external components:

- LDAP server (if you are using LDAP as your user source)
- GroupWise Post Office Agent (POA)
- Browser connection for the Mobility Admin console
- Mobile devices

For instructions, see "Security Administration" on page 79.

Setting Up a Device Password Security Policy

To increase your control over mobile device access to your Mobility system, you should establish a device password security policy to ensure that users set up secure passwords on their mobile devices. For instructions, see "Enabling a Device Password Security Policy" on page 40.

Securing the Mobility Admin Console

During installation of the Mobility Service, you selected the source (LDAP or GroupWise) from which users and groups of users can be added to your Mobility system. For background information, see "Selecting the User Source for Your Mobility System" in the *GroupWise Mobility Service 18 Installation Guide*.

One Mobility administrator is established when you install the GroupWise Mobility Service. If you are using LDAP as the user source, you selected one LDAP user as the Mobility system administrator and you can designate additional Mobility administrators, as described in "Setting Up Multiple Mobility Administrator Users" on page 13. If you are using GroupWise as the user source, the `root` user on the Mobility server is the Mobility administrator user.

IMPORTANT: The number of people who know how to log in to the Mobility Admin console should be kept to a minimum.

The Mobility Admin console can be integrated with a single sign-on solution. For more information, see “Using the Mobility Admin Console with a Single Sign-On Solution” on page 11.

Protecting Mobility Configuration Files

The configuration files for all internal Mobility components should be protected from tampering. Configuration files are found in the following default locations:

Internal Mobility Component	Configuration File
Sync Engine	`/etc/datasync/syncengine/engine.xml`
Web Admin	`/etc/datasync/webadmin/server.xml`
Config Engine	`/etc/datasync/configengine/configengine.xml`
Connector Manager	`/etc/datasync/syncengine/connectors.xml`

Protecting Mobility Log Files

The log files for all internal Mobility components should be protected against unauthorized access. Some log files contain very detailed information about your Mobility system and users. Mobility log files are found in the following locations:

Internal Mobility Service Component	Log File Subdirectory under /var/log/datasync	Log File Name
Sync Engine	`syncengine`	`engine.log`
Config Engine	`configengine`	`configengine.log`
Web Admin	`webadmin`	`server.log`
Connector Manager	`syncengine`	`connectorManager.log`

Sync Agents	`connectors`	`groupwise-agent.log`
		`groupwise.log`
		`mobility-agent.log`
		`mobility.log`

If you set the Mobility Service log level to Debug, Subject lines are included in log files for troubleshooting purposes. This information identifies items that are experiencing synchronization problems.

If you use the Debug log level, ensure that log files are kept secure to protect users’ personal information. The Info log level is strongly recommended for a smoothly functioning Mobility system.

No text about recipients or from message bodies is included in log files.

Certificate Verification

GroupWise Mobility Service 18 allows verification of the POA TLS/SSL certificate. After the installation or upgrade, certificate verification is disabled by default.

- Prerequisites
- Gathering CA Certificates
- Verifying the CA Certificates
- Adding the CA Certificates
- Enabling Certificate Verification
- Troubleshooting Certificate Verification

Prerequisites

- In the GroupWise Admin Console, the POA TCP/IP address needs to have the DNS name specified.
- In the Mobility Admin Console, the POA SOAP address needs to have the DNS name specified instead of the IP address.

Gathering CA Certificates

Follow the section that matches how you generated your POA certificates for each CA that you need to gather:

- GroupWise 18 Certificate Authority
- NetIQ Certificate Server
- Trusted Commercial Certificate Authority

GroupWise 18 Certificate Authority

If your CA is GroupWise (18 or later), you can use one of the two methods below to get the certificate.

Method 1

1. Open a browser to `https://`*`primarydomainip`*`:`*`adminport`*`/gwadmin-service/system/ca`.

   For example: `https://10.10.10.10:9710/gwadmin-service/system/ca`
2. Enter your GroupWise admin credentials.
3. Save the certificate to the GMS server in `/var/lib/datasync/mobility`.
4. Continue with Verifying the CA Certificates if you have gathered all of your CA certificates.

Method 2

1. Open a terminal on your GMS linux server.
2. Enter the following command:

   ```
   curl -k --user username -o filename https://primarydomainip:adminport/gwadmin-service/system/ca
   ```

   Replace `username` with your admin username and `filename` with the name of the saved file.

3 Copy the certificate and then save it to the GMS server in `/var/lib/datasync/mobility`.
4 Continue with Verifying the CA Certificates if you have gathered all of your CA certificates.

NetIQ Certificate Server

If your CA is a NetIQ Certificate Server, follow the steps below:

1 Login to iManager.
2 Select **NetIQ Certificate Server**.
   It may be called **Novell Certificate Server** depending on your version of iManager.
3 Select **Configure Certificate Authority**.
4 Select the **Certificates** tab.
5 Select the **Self Signed Certificate** check box.
6 Select **Export**.
7 Unselect **Export private key**.
8 Select export formate as Base64.
9 Select **Next**.
10 Select **Save the exported certificate file**. Save it to the GMS server in `/var/lib/datasync/mobility`.
11 Continue with Verifying the CA Certificates if you have gathered all of your CA certificates.

Trusted Commercial Certificate Authority

If your CA is a commercial CA, follow the steps below:

1 Verify if your certificate is in the Mozilla trusted root CA store by checking the `/var/lib/datasync/mobility/cacert.pem` file on the GMS server where the CA store is stored. If your CA is in the list, continue with Verifying the CA Certificates if you have gathered all of your CA certificates.
   or
2 If your CA is no in the list, you need to find your CA public root certificate and place it on the GMS server in `/var/lib/datasync/mobility`. Continue with Verifying the CA Certificates if you have gathered all of your CA certificates.

Verifying the CA Certificates

Once you have your CA certificate, make sure it meets the following requirements:

- Base64-encoded format
- In the `Basic Constraints`, ensure that `Subject Type=CA` is specified.
- Ensure that the current date is between the `Valid from` and `Valid to` dates.
- The `Issuer` and the `Subject` match.

You can verify these requirements by viewing the details of the certificate or by running an openssl command to view the certificate information.

If your CA meets these requirements, continue with Adding the CA Certificates.

Adding the CA Certificates

For the certificate verification to work, the CA certificates found previously needs to be added to the mob_ca.pem file. Follow the section that matches each CA certificate you gathered previously:

- "GroupWise 18 Certificate Authority" on page 89
- "NetIQ Certificate Server" on page 89
- "Commercial Certificate Authority" on page 89

GroupWise 18 Certificate Authority

1. In a terminal on your GMS server, go to `/var/lib/datasync/mobility/`.
2. Add your CA certificate to the `mob_ca.pem` file using the following command:

   `cat yourCACertficate.pem >> mob_ca.pem`

   NOTE: You may need to add a hard return in the `mob_ca.pem` after the certificate before you add any other certificates to the file.

   ---
3. Continue with Enabling Certificate Verification if you have added all of your CA certificates.

NetIQ Certificate Server

1. In a terminal on your GMS server, go to `/var/lib/datasync/mobility/`.
2. Add your CA certificate to the `mob_ca.pem` file using the following command:

   `cat yourCACertficate.pem >> mob_ca.pem`

   NOTE: You may need to add a hard return in the `mob_ca.pem` after the certificate before you add any other certificates to the file.

   ---
3. Continue with Enabling Certificate Verification if you have added all of your CA certificates.

Commercial Certificate Authority

1. In a terminal on your GMS server, go to `/var/lib/datasync/mobility/`.
2. If your CA is not in the Mozilla CA certificate list, add your CA public certificate to the `mob_ca.pem` file using the following command:

   `cat yourCACertificate.pem >> mob_ca.pem`

   or

   If your CA is in the list, copy the cacert.pem file to `mob_ca.pem` using the following command:

   `cat cacert.pem >> mob_ca.pem`

   NOTE: You may need to add a hard return in the `mob_ca.pem` after the certificate before you add any other certificates to the file.

   ---
3. Continue with Enabling Certificate Verification if you have added all of your CA certificates.

Enabling Certificate Verification

Before you enable certificate verification, take a backup of the `/var/lib/datasync/mobility/mob_ca.pem` file.

1 Login to the GMS WebAdmin
2 Select **Config** > **GroupWise**.
3 Select **SSL Certification Verification**.
4 Select **Apply**.
5 In a terminal on the GMS server, restart GMS using the following command:

```
rcgms restart
```

Troubleshooting Certificate Verification

You may experience SSL problems the first time you enable certificate verification. The following are helpful OpenSSL commands:

- Verify POA Connection
- Verify a Certificate
- View Certificate Information
- Get POA Certificate
- View Certificate Purpose

Verify POA Connection

`openssl s_client -showcerts -CAfile` *`CA_public_certificate`* `-connect` *`poa_DNS`*`:soap_`*`port`*

Example: `openssl s_client -showcerts -CAfile gwcacert.pem -connect gw.provo.novell.com:7191`

Verify a Certificate

`openssl verify -issuer_checks -CAfile` *`CA_public_certificate POA_certificate`*

Example: `openssl verify -issuer_checks -CAfile cacert.pem gwpoa.pem`

View Certificate Information

`openssl x509 -in` *`certificate`* `-noout -text`

Example: `openssl x509 -in gwcacert.pem -noout -text`

Get POA Certificate

`openssl s_client -showcerts -connect` *`poa_DNS`*`:`*`soap_port`*

Example: `openssl s_client -showcerts -connect gw.provo.novell.com:7191`

View Certificate Purpose

```
openssl x509 -in certificate -noout -purpose
```

Example: `openssl x509 -in gwcacert.pem -noout -purpose`

Secure Gateway (GWAVA 7) Integration

Mobility 18 provides an integration with Secure Gateway (GWAVA 7) to secure your device emails. Device emails are scanned and accepted or rejected. If accepted, the message is delivered to GroupWise. If rejected, the sender receives an email explaining that the email was rejected by the Secure Gateway scan.

For this integration to work, you must do the following:

1. An Interface must be created in Secure Gateway for Mobility. For information on creating an interface see SMT Interface (http://support.gwava.com/documentation/GWAVA/70/html/index.html#t=SMTP_Interface.htm) in the Secure Gateway documentation.
2. Open the following file on the Mobility server:

   ```
   /etc/datasync/confinengine/engines/pipeline1/connectors/mobility/connecter.xml
   ```

3. Add the following elements in the <custom> section:

Element	Value
`<securegatewayEnable>0</securegatewayEnable>`	A “0” is disabled. A “1” is enabled. Set the value to “1” if you want to use Secure Gateway.
`<securegatewayHost>securegatewayhost</securegatewayHost>`	securegatewayHost should be set to the value found in the Secure Gateway Admin > **Module Management** > **Interfaces** > **3rd Party Application Manager** > *<Name of Interface created for GMS>* > **Server Address**.
`<securegatewayPort>securegatewayport</securegatewayPort>`	securegatewayPort should be set to the value found in the Secure Gateway Admin > **Module Management** > **Interfaces** > **3rd Party Application Manager** > *<Name of Interface created for GMS>* > **Server Address:Port**.
`<securegatewaySecure>securegatewaysecure</securegatewaySecure>`	A “0” is non-secure or HTTP. A “1” is secure or HTTPS. Set the value to what you are using for Secure Gateway.
`<securegatewayAppkey>securegatewayAppkey</securegatewayAppkey>`	securegatewayAppkey should be set to the value found in the Secure Gateway Admin > **Module Management** > **Interfaces** > **3rd Party Application Manager** > *<Name of Interface created for GMS>* > **Application Key**.

4. Restart Mobility.

A GroupWise Mobility System Troubleshooting

- "Device Troubleshooting" on page 93
- "Mobility Service Troubleshooting" on page 95
- "GroupWise Sync Agent Troubleshooting" on page 96
- "Device Sync Agent Troubleshooting" on page 98

Device Troubleshooting

- "Initial synchronization fails" on page 93
- "The user's mobile device cannot connect to the Mobility System" on page 93
- "The user's mobile device has stopped synchronizing" on page 94
- "The data on the user's mobile device does not match what displays in GroupWise" on page 94
- "The timestamps on calendar items do not match between a user's mobile device and the GroupWise mailbox" on page 94
- "Some items never synchronize to the mobile device" on page 95
- "The specific actions suggested above have not resolved a synchronization problem" on page 95

Initial synchronization fails

Possible Cause: The Device Sync Agent is not getting the information it needs from the GroupWise Sync Agent.

Action: Ensure that the user has a valid GroupWise account.

Possible Cause: You are using LDAP as your user source, and the user's GroupWise user name is different from the user's LDAP user name.

Action: Set the user's user name to the GroupWise user name. For instructions, see "Setting GroupWise User Names for LDAP Users (Optional)" on page 57.

Possible Cause: Varied.

Action: Remove the user from the Mobility system, then add the user again.

The user's mobile device cannot connect to the Mobility System

Possible Cause: The user has not configured the mobile device correctly.

Action: Refer the user to the *GroupWise Mobility Quick Start for Mobile Device Users*, and provide the user with the details specific to your Mobility system.

Possible Cause: You have configured the Mobility Service for a secure SSL connection and the certificate is not working properly.

Action: Try using a non-secure connection. If a non-secure connection works and a secure connection does not work, ensure that the certificate is correctly set up. For setup instructions, see "Securing Communication between the Device Sync Agent and Mobile Devices" on page 80.

Action: For more detailed information, see GroupWise Mobility Service Device Sync Agent SSL Issues (http://wiki.novell.com/index.php/Data_Synchronizer_Mobility_Connector_SSL_Issues).

Possible Cause: The user's device is not accepting the self-signed certificate created by the Mobility Service Installation program.

Action: See "Manually Downloading a Certificate to a Mobile Device" on page 83 for assistance.

The user's mobile device has stopped synchronizing

Possible Cause: Varied.

Action: Resynchronize the device. For instructions, see "Resynchronizing a Device" on page 62. This removes the GroupWise data that is currently on the device and replaces it with the GroupWise data that is currently available in the Mobility system

The data on the user's mobile device does not match what displays in GroupWise

Possible Cause: Varied.

Action: Resynchronize the device. For instructions, see "Resynchronizing a Device" on page 62. This removes the GroupWise data that is currently on the device and replaces it with the GroupWise data that is currently available in the Mobility system

Action: Have the user remove the account from the device, and then re-add the account. This is a manual way of resynchronizing the device.

Action: If reinitializing the device does not resolve the problem, have the user remove the account from the device. Then reinitialize the user. For instructions, see "Reinitializing a User" on page 65. This removes the GroupWise data that is currently in the Mobility system and requests current data from GroupWise. The process of deleting the data in the Mobility system and requesting current GroupWise data can take a long time.

After you reinitialize the user, have the user re-add the account so that the current GroupWise data in the Mobility system transfers to the device.

Action: If reinitializing the user does not resolve the problem, delete the user from the Mobility system, and then re-add the user. See "Managing Mobile Device Users" on page 55.

The timestamps on calendar items do not match between a user's mobile device and the GroupWise mailbox

Possible Cause: The date and time on the Mobility server does not match the date and time on the GroupWise server.

Action: Reset the time on the Mobility server to match the time on the GroupWise server. This Mobility system requirement is listed in "Mobility Server Requirements" in the *GroupWise Mobility Service 18 Installation Guide*.

Some items never synchronize to the mobile device

Possible Cause: Some events automatically synchronize to mobile devices. Other events do not synchronize to mobile devices unless users request them. The user has not yet requested the optional events.

Action: None. This is normal. The unsynchronized events eventually expire.

Possible Cause: The Device Sync Agent might not be transferring the events to the mobile device.

Action: Check the user's synchronized items in the Dashboard. Observe the **Pending** column and the **Synced** column to see if progress is still being made.

If events are still transferring to the device, wait while the process completes.

If events are not transferring to the device, restart the Device Sync Agent.

Possible Cause: The user's GroupWise mailbox contains a damaged message, or the user's mailbox is damaged. Mailbox damage can cause the GroupWise Sync Agent to synchronize unusable data to the Device Sync Agent.

Action: Repair the user's mailbox. For more information, see Maintaining User/Resource and Message Databases in the *GroupWise 18 Administration Guide*.

Possible Cause: Varied.

Action: Remove the user from the Mobility system, and then add the user again.

The specific actions suggested above have not resolved a synchronization problem

Possible Cause: Varied.

Action: Perform the following procedure to start over for a particular mobile device user, similar to rebooting a computer:

1. Remove the user's account from the mobile device.
2. Remove the user from the Mobility system.
3. Restart the Mobility Service.
4. Add the user to the Mobility system.
5. Add the user's account to the mobile device.

Mobility Service Troubleshooting

- "You cannot access the Mobility Admin console after installation" on page 96
- "The Mobility Admin Console cannot communicate with the LDAP server" on page 96
- "The process of adding users does not proceed as expected" on page 96

See also:

- "Working with Log Files" on page 51

You cannot access the Mobility Admin console after installation

Possible Cause: The date and time on your workstation does not match the date and time on the Mobility server.

Action: Reset the time as needed so that the workstation and the Mobility server match. This Mobility system requirement is listed in "Mobility Server Requirements" in the *GroupWise Mobility Service 18 Installation Guide*.

The Mobility Admin Console cannot communicate with the LDAP server

Explanation: When you use LDAP as your user source, the Mobility Admin console must be able to communicate with your LDAP server in order to list users to add to your Mobility system. If the Admin console cannot list users, it cannot communicate with your LDAP server.

Possible Cause: A firewall is blocking communication between the Mobility Service and the LDAP server.

Action: Ensure that communication through the firewall is allowed on port 636 for a secure LDAP connection or port 389 for a non-secure LDAP connection.

Possible Cause: The LDAP server is not functioning correctly.

Action: Reboot the LDAP server.

The process of adding users does not proceed as expected

Explanation: When you add a large number of users to the Mobility Service in a group, the Admin console might not display progress as expected. Refreshing the page might give an invalid server error.

Possible Cause: A timing issue between the Add User process and the display of the Admin console page occasionally causes this problem.

Action: Wait for a while, and then refresh your browser.

GroupWise Sync Agent Troubleshooting

- "The GroupWise Sync Agent cannot communicate with the GroupWise Post Office Agent (POA)" on page 97
- "Data does not transfer between GroupWise and the GroupWise Sync Agent" on page 97
- "The GroupWise Post Office Agent (POA) shows errors communicating with the GroupWise Sync Agent" on page 97
- "The GroupWise Sync Agent takes a long time to start" on page 97
- "The GroupWise Sync Agent fails to start after working successfully" on page 97

See also:

- "Working with Log Files" on page 51

The GroupWise Sync Agent cannot communicate with the GroupWise Post Office Agent (POA)

Explanation: The GroupWise Sync Agent must be able to communicate with a POA in order to synchronize mailbox data. The GroupWise Sync Agent is unable to establish the connection.

Possible Cause: The POA is not running.

Action: Start the POA.

Data does not transfer between GroupWise and the GroupWise Sync Agent

Possible Cause: Varied.

Action: Ensure that the required ports are open on the GroupWise POA server and the GroupWise Sync Agent server. For instructions, see "Opening Required Ports" in the *GroupWise Mobility Service 18 Installation Guide*.

Action: Check the GroupWise Sync Agent log file. For instructions, see "Working with Log Files" on page 51.

The GroupWise Post Office Agent (POA) shows errors communicating with the GroupWise Sync Agent

Explanation: As you monitor the POA, you might see 890F and 8910 error codes.

Possible Cause: The connection between the GroupWise Sync Agent and the POA has temporarily closed.

Action: None. The connection is re-established automatically. These error codes are benign and can be ignored.

The GroupWise Sync Agent takes a long time to start

Possible Cause: The GroupWise Sync Agent services users that are scattered throughout your GroupWise system. Therefore, POA-to-POA communication is required in order to gather the events from the GroupWise users and return them to the GroupWise Sync Agent.

Action: None. When all GroupWise user events have been received, the status changes to **Running**.

The GroupWise Sync Agent fails to start after working successfully

Possible Cause: Another application that communicates with the POA using SOAP has created SOAP event configurations that are causing a problem for the GroupWise Sync Agent.

Action: Delete residual SOAP event configurations:

1. Stop the GroupWise Sync Agent.
2. In the POA web console, click **Configuration**.
3. In the **Internet Protocol Agent Settings** section, click **Event Configuration List**.

4 Click each user, select **Delete Event Configuration**, then click **Submit**.

5 After all event configurations have been cleared, start the GroupWise Sync Agent.

Device Sync Agent Troubleshooting

- "The Device Sync Agent does not start" on page 98

See also:

- "Working with Log Files" on page 51

The Device Sync Agent does not start

Possible Cause: The GroupWise Sync Agent is not running.

Action: Start the GroupWise Sync Agent.

Possible Cause: The Mobility Service is not running.

Action: Check the current status of the Mobility Service. If needed, start or restart the Mobility Service. For instructions, see "Starting and Stopping the GroupWise Mobility Service" on page 19. Then start the Device Sync Agent in the Mobility Admin console.

Possible Cause: An application on the Mobility server is using ports 80 and 443. These ports need to be available for use by the Device Sync Agent for communicating with mobile devices.

Action: Stop and disable the other application that is using ports 80 and 443 on the Mobility server.